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EDITORIAL COMMENT

The Man Who Reads

The man who reads everything he can find that pertains to the work he is doing is the man who will go a long way. He will easily pass the other fellow who thinks that he can learn enough by personal experience. He will get ideas that could come to him in no other way. No matter how good a head a man has, every other man thinks of things that will never enter the head of the first. Since it is manifestly impossible to come into personal contact with many other men in the profession, the next best way of getting their ideas and their methods is to read them wherever they appear in print. Books on business subjects both directly and indirectly akin to the drug store are many and valuable. The reading habit is one that every druggist may well cultivate. It is one that will bring in actual and tangible returns in better business.

Patent Law Amendment

Hearings on the Oldfield bill to revise and codify the patent laws of the United States covering the greater part of a month were had before the House Committee on Patents, under the chairmanship of Representative Oldfield. The bill contains two important new features, one providing for compulsory licensing of persons who wish to use patented inventions, the other intended to prevent the establishment of fixed prices for the sale of patented articles and prohibiting contracts for the compulsory purchase of supplies and equipment to accompany such inventions during the period of their use. Thus far the bulk of the testimony before the committee has been presented by manufacturers who oppose the passage of any such bill. Practically all manufacturers are antagonistic. Inventors are divided, some favoring, others opposing the bill, but the majority opposing it. Users of patented articles are uniformly in favor of the measure, but they are hesitant about presenting their views because they fear that such action will cause trouble for them in their business relationships. They have, however, visited Washington in large numbers for the purpose of strengthening the legislators who are friendly to the measure. Thus far few or no drug and remedy interests have directly appeared before the committee.

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Language

Whether it is fair or not to do so, the world persists in judging people by the little things. We mark a man's class in accordance with his personal appearance. We estimate his success by his clothes. In just this way we judge a person's ability, his education and his mental capacity by his language. A druggist is expected by the public to be a man of education. He is supposed to be possessed of more learning than the merchants in the ordinary lines of business. It is recognized that he has been obliged to spend a certain length of time in study in order to fit himself for the practice of his profession. If his language is such as attracts attention by reason of its grammatical errors, the effect will be the same as if we were to consult a physician and find him talking the language of the slums. A cultivated speaking voice and correct grammar will go farther to carry an impression of capability and confidence than a thousand dollars' worth of fancy fixtures behind a man who says "We ain't got none today." The little niceties of speech and dress and action are as well worth studying as the pharmacopœia.

Why Does Milk Sour in a Thunder Storm?

This question, which has puzzled many inquisitive philosophers, is brought up again by Trillat (Compt. rendus 154, 613-616, through Ap. Zt., 1912, No. 26.) He believes that both pathogenic microbes and milk souring germs thrive best and find stimulation in an atmosphere contaminated with putrefactive products. As the atmospheric pressure is lessened during a storm, it is evident that any such gases that might be imprisoned in the earth or in any exposed objects would tend to be set free at this time. The elevation of temperature and humidity which so often accompanies a shower would also be favorable to the germs which were floating in the air. Trillat attributes the fact that meat, game and certain other food products are often spoiled at the time of a storm, to the same agencies, and states that it has been noticed that wounds do badly and contagion is most contagious at such times. Such a theory is hard to reconcile with our notions of the purity of the atmosphere impregnated with ozone and washed clean with the rain, and we should prefer to believe that the change was in the milk itself, perhaps some slight molecular change in the lactose which renders it more easily fermentable. As to contagion, the consensus of opinion seems to be that dry, dusty weather is much more favorable to the spread of air-born diseases than is damp or rainy weather.

An Important Patent Law Decision

A long disputed point in patent law was settled June 7 by a decision of the Supreme Court at Washington that is of far reaching importance; what effect it will have on the future development of patents is of more importance than its effect on present litigations. Briefly the decision of the court is that improvement of a patented article which makes it far superior to the original does not constitute an infringement except in so far as the improver uses the original patent as part of his device. The court held that an infringer of a certain patent need not pay more than $1 damages to the owner of the original patented device, since he had made valuable improvements upon it, and the owner of the patent in his suit failed to show how much of the alleged infringer's profits were due to improvements made by him and how much were due to use of the original patented device. This decision was handed down in the case of the Westinghouse Electric and Manufacturing Company against the Wagner Electric Manufacturing Company for alleged infringement of an electric device, the plaintiff being awarded damages not to exceed $1 in the suit. It is often a very difficult question to decide when an improvement of an existing patent constitutes a useful and novel improvement superseding the original device or whether the improvement claimed is but a trifling alteration or rearrangement of parts or is simply the addition of some unimportant device and is intended solely to enable its owners to escape payment of just royalties to the original inventor. The question thus depends upon the integrity of the alleged infringer both as to motives and usefulness of his improvements, but much loss and annoyance to the owner of a valuable patent can be caused by unscrupulous parties unless he is able to prove absolutely fraudulent motives and acts.

THE FAIRCHILD LECTURES

THROUGH the generosity of Samuel W. Fairchild, of New York, the pharmacists of London were enabled this spring to hear a series of five post-graduate lectures at the Bloomsbury Square school of the Pharmaceutical Society of Great Britain, which marked an epoch in the educational side of pharmacy. No such step had ever been undertaken before, either here or abroad, and the lectures delivered have set a high standard both in the deep scientific knowledge displayed and in the lessons deduced for practical application to the drug business.

THE first of the lectures was delivered by Sir William A. Tilden, D. Sc., LL.D., F. R. S., one of the most eminent research chemists in the world, who dealt with the history and chemical relations of the terpenes. The second and third lectures were delivered by Prof. W. H. Perkin, and the fourth and fifth lectures by John C. Umney, F. C. S., editor of the Perfumery and Essential Oil Record and managing director of the firm of Wright, Layman & Umney, and elected only this month to the presidency of the British Pharmaceutical Conference. The fund donated by Mr. Fairchild for defraying the expenses of these lectures was given as a result of a suggestion at a banquet given to Mr. Fairchild in London something over a year ago by representatives of British pharmacy.

THE establishment of this post-graduate course of lectures is a recognition of the fact that in this era of specialization it is not to be expected that the regular curriculum of a school of pharmacy can be made to cover completely every aspect of the many sided calling which the student is about to enter. The most that can be done in the school is to give the student a broad, accurate and comprehensive grasp of the fundamental facts and principles upon which pharmacy, including pharmaceutical chemistry, botany and pharmacognosy, is based. The student having acquired such a foundation of knowledge is in a position to take up the detailed study of particular fields and no field offers a more interesting opportunity for research than does that of essential oils, which has been so admirably covered in these Fairchild post-graduate lectures.

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BY providing this series of lectures Mr. Fairchild admirably supplements the gift which his firm made to the cause of education in pharmacy by the establishment of the Fairchild scholarship open annually to all registered students of pharmacy in Great Britain. Mr. Fairchild's interest in education is not confined to one side of the Atlantic, for it was under his administration as president that the College of Pharmacy in the City of New York forsook its antiquated quarters on Twenty-third street and erected the handsome and commodious structure now occupied by it on Sixty-eighth street. Credit for the move and for its success is in a large part due to the energetic, efficient and far sighted direction of the affairs of the institution by Mr. Fairchild as its president for years. We most heartily commend to other pharmaceutical chemists the admirable example which Mr. Fairchild has set in giving both of his services and of his means to the elevation of the calling of which he is so distinguished a member.

A. PH. A. PRESIDENTS

THE election of John C. Umney, of the wholesale firm of Wright, Layman & Umney, to the presidency of the British Pharmaceutical Conference, to succeed Sir Edward Evans, himself the head of one of the largest wholesale drug houses in the world, directs attention to the fact that the British association has not infrequently sought for its president among the wholesale dealers and manufacturers, while the American organization has of late years at least not elected to the presidency any wholesale dealer or manufacturer. In fact, since its organization in 1852 only six of the presidents have been engaged in the wholesale business and in all of these cases the men elected had made their mark in pharmacy as retailers before becoming manufacturers. The presidents who may be classified as having been wholesalers or rather wholesale manufacturers are Charles Ellis, 1857; W. J. M. Gordon, 1864; Frederick Stearns, 1866; Charles Bullock, 1876; John Uri Lloyd, 1887; Edgar L. Patch, 1893, and Charles E. Dohme, 1898. Of the other presidents eighteen were teachers and the remainder retail pharmacists, while seven of the teachers were editors as well as teachers and several of the retailers were also teachers. The tendency to elect teachers seems to have been accelerated of late, four having been elected in succession in the past five years.

THIS record is rather interesting as compared with that of the presidents of the British Pharmaceutical Conference, for it indicates either that in Great Britain technical knowledge is more general among the heads of the manufacturing houses than in the United States or that the manufacturing pharmacists of the United States are too much engaged with the commercial aspects of their business to take an active part in the deliberations of the American Pharmaceutical Association. A review of the personnel of the manufacturing houses of this country indicates that as a matter of fact both these factors have operated to exclude the manufacturing pharmacist from the presidency of our association. There are several men at the head of some of the largest establishments in the United States who in technical training and attainment would not suffer by comparison with such men as Thomas Tyrer, Charles Umney, his son John C., or Sir Edward Evans of the British Conference, while the direction of the affairs of some of the larger pharmaceutical establishments is vested in men who make no pretense to scientific training. Such manufacturing pharmacists as have the scientific training and technical skill should, we think, take an active part in the affairs of the American Pharmaceutical Association as is apparently done by their colleagues in Great Britain, for we believe that the time devoted to association work would be amply paid for both in honors won and in the more direct benefits to be derived through the publicity incidental to such work.

THE BRITISH PHARMACEUTICAL CONFERENCE

THE forty-ninth annual meeting of the British Pharmaceutical Conference, which was held in Edinburgh from July 29 to August 2, brought out a number of interesting papers, abstracts of which are presented on another page.

THE presidential address of Sir Edward Evans contained extended reference to the observations made during his recent visit regarding the work of the Bureau of Plant Industry of the United States Department of Agriculture, with which our readers are already familiar, in studying the problems connected with the cultivation of medicinal plants. He referred particularly to the importance of cascara bark as an instance of the importance of the drug industry, stating that 100,000 trees were destroyed annually on the western coast of the United States and British Columbia in order to produce the thousand tons of cascara bark which are consumed each year. Sir Edward also took occasion to compliment the authorities of the United States on the care taken to insure the purity of drugs admitted to this country. The suggestion offered by Sir Edward Evans that the British government follow the example of the United States government in fostering the culture of medicinal plants is another echo of his visit to the United States. This subject was also treated of in a paper by J. H. E. Evans and it is evident that the agitation of this matter which has gone on in the United States for some years has made an impression upon our British cousins, arousing them to a realization of the necessity for making provision against that time when the stock of wild drugs will have been exhausted.

THE observations made by Doctor Goodall regarding the potency and keeping properties of some galenicals as determined by physiological test touched upon a matter which has been much discussed in the United States. His deductions that the tincture of strophantus keeps indefinitely while the tincture of digitalis is not to be depended upon for over a year are not exactly in accord with the conclusions reached by some of our investigators.

THE election of John C. Umney to the presidency of the conference is noteworthy in view of the fact that he, like his predecessor, Sir Edward Evans, is engaged in business as a manufacturing pharmacist. Both the retiring and the incoming presidents are admirably equipped by knowledge, training and temperament to fill the important position of president of the British Pharmaceutical Conference, and a review of the names of the presidents of the conference shows that they are by no

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means the first manufacturers to be singled out for this honor, for among the thirty-five presidents who have presided over the fortunes of the conference since its organization in 1864, fifteen may be looked upon as engaged in the manufacture or sale of chemicals or pharmaceuticals at wholesale. Five were teachers by vocation and the remainder were actively engaged in retail pharmacy. On comparing this record with that of the presidents of the American Pharmaceutical Association, we find that only six of the sixty have been engaged in the wholesale business, while eighteen have been teachers. Further reference to this subject is made in the note on A. Ph. A. presidents in this issue.

IT PAYS TO LOOK COOL

IT is a true saying that the next best thing to keeping cool is to look cool and this is true both as to one's temper and one's temperature. The man who looks cool and collected, although boiling with rage internally, always has the advantage over the man who boils over and shows his heat of temper, likewise a store that looks cool in summer has an advantage over the store that looks hot, although it may actually be even a little warmer. This is a point often overlooked by druggists, especially during hot spells such as we recently had, for when one is almost at the limit of endurance even the sight of a place that suggests more hotness irritates one and inspires a distaste to entering it. Similarly, a glance into a cool looking store irresistibly attracts one to enter if just to enjoy its coolness, and if there is a cool looking soda fountain in the store the combination is irresistible. But if the store looks hot the fountain will look hot, and no matter how cold the drinks may be the customer will have to be mighty thirsty before he will go in for a soda. He not only wants a cooling drink, he wants a cool place to drink it in.

THERE are many reasons why a store may be hot inside, but there is nothing that will make it look hotter than being brilliantly lighted, especially at night. To the person standing outside in the dark street a brilliantly lit interior filled with glaring electric lights always suggests warmth and the store looks hot even if it is not. Light suggests heat, shade suggests coolness, just as the shade under the tree makes the spot look cooler than the field in the open sunlight; therefore, instead of going contrary to this natural feeling, the druggist should seek to turn it to his profit by making his store look cool and avoid over lighting it in hot weather. This does not mean that the store should be dark inside, for darkness repels just as much as does too much light. What should be sought for is shade, an effect similar to the shade under a tree in the sunlight where there is plenty of light but no glare.

KEEPING the store well lighted yet softly lighted is easy if one takes the trouble. One of the best ways to secure a cool looking light is to use frosted electric light bulbs exclusively in the part of the store reserved for customers, having these of plain white frosted glass in the store part and using a few frosted colored globes at the fountain. But never use plain red globes at the fountain in summer, the color is too suggestive of heat; if a rosy light is wanted, and it is very effective over showcases, frosted bulbs or globes should be used. If frosted globes are considered too expensive, the plain globes can easily be coated with a solution of shellac or varnish that will soften the light, or they may be dipped in a saturated solution of some salt such as alum and then varnished with collodion or thin varnish. To add to the cool appearance of the inside of the store, the contrast of a brilliantly lighted window is very effective, but the inside of the show window must be shaded to prevent the bright light from shining into the store and spoiling its soft light effects. This can be easily done by shades or drapery or screens of crepe paper and should never be omitted, as the effect of the contrast as well as the lighting will be spoiled.

DURING the daytime, too, the store should be made to look as cool as possible, and cool colors, such as greens, yellows and blues, should be used exclusively as color schemes for decorations and displays. "As the sight of a green oasis in a desert is to weary eyes" so is the sight of a cool store to the hot and thirsty mortal in summertime, and how he enjoys buying a cool drink in a cool place.

A FINANCIAL CRISIS IN EUROPEAN PHARMACY

IT is a somewhat curious coincidence to note that at the same time as the American pharmacist is deploring the decline in prescription work, his European confrère in monopoly countries is seriously troubled by the steady decline in profits from this, his most profitable, source of income. The familiar cry that prescribing has now become a lost art is voiced on both sides of the Atlantic, but the causes which have led to what is practically a financial crisis in pharmacy in some European countries differ widely from those prevailing in America.

IN those European countries in which pharmacy is treated as a monopoly and the number of businesses is limited in proportion to the population, the government itself regulates the charges for prescriptions. In these countries the charge for every prescription has to be calculated according to the basis established by the government, involving a little exercise in arithmetic in each case, as the cost of each ingredient, the charge for the container and the charges for the manipulations involved have to be carefully noted on the prescription and totaled up. Thus the charge for a prescription is the same for rich and poor alike, for any overcharge is visited with severe penalties, and cutting is an unknown expression to the man who calmly charges more than the printed sale price on a specialty if that price does not allow him the 60 percent. increase on cost price to which he is legally entitled.

IT would thus seem as if the pharmacist in these happy countries had nothing to complain of, the doctors are forbidden to despense, the charges for prescriptions are uniformly regulated, cutting is not practised, competition is limited, and side lines are practically an unknown quantity. But the trouble is that the bases according to which the charges in these prescription tariffs are calculated have remained unaltered for many years, so that the profit allowed to the pharmacist is the same now as it was several years ago. In the meantime, the cost of living, taxes, expenses and salaries have risen very considerably, so that the margin of net profit has dwindled to such an extent that almost nothing is left for the owner. The pharmacist is thus confronted, in spite of his privileged position, by a very serious financial crisis.

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NUMEROUS petitions have been presented to the German and Austrian governments praying for an increase in the prescription charges, but so far a deaf ear has been turned to these appeals. It must be remembered that one factor not known in the United States has had an enormous economic influence on pharmacy in these countries. The introduction of compulsory insurance against sickness brought a great volume of new business to the pharmacist. But the sick clubs compel their doctors to prescribe as cheaply as possible and to avoid as far as possible the use of expensive forms of dispensing, such as infusions, powders, or pills. In some cases the doctor is compelled to prescribe the total quantity of powder with instructions to the patient to "take as much as will go on the point of a knife," for instance, half an ounce of sodium salicylate instead of the corresponding number of divided powders, or the same quantity of potassium iodide is to be dissolved in a bottleful of water. This saves the cost of manipulations, but apart from the loss of revenue to the pharmacist resulting from this form of prescribing, it has had a deleterious influence on the doctor's mode of prescription writing for his well to do patients. Thus the cost of prescriptions during the past few years shows a steady decrease, while for the reasons mentioned above the actual profit to the pharmacist has shrunk considerably. Dispensing still forms the principal source of income to the Teuton pharmacist, and as he cannot take up a profitable side line to make good this loss, it naturally follows that the profession is confronted by a most serious state of affairs. The pharmacist is credited popularly with making a profit of "99 percent.," and in view of the sick clubs clamoring for even cheaper medicines, or for permission to open their own pharmacies, the government hesitates to make further concessions to the pharmacists, particularly when we remember that the sick clubs, with their millions of members, play an important rôle in politics.

SEEING that individual representations had no effect, the Austrian pharmacists decided a short time ago to prove to the government that practically no profit was made on sick club prescriptions by laying the actual facts of the case before the ministry. To this end 10,000 sick club prescriptions, 2,000 from each of five important organizations were taxed according to the official prescription tariff. The average charge per prescription amounted to 22 cents, but as the pharmacist is obliged to grant a rebate of 33⅓ percent. off the charges of the tariff in the case of all sick club prescriptions, this meant that the net charge for each amounted to 15 cents. The net total payable to the pharmacist for these 10,000 prescriptions amounted to $1,511.80. The actual outlay involved in dispensing these was illustrated by the charges for the following items:

Cost of drugs and materials	$530.90
Interest on same	50.00
Salary of assistant	519.80
Wages	93.20
Taxes, stamp duties, cost of revision	93.30
Cost of drugs used in testing for their purity according to the pharmacopœia	26.40
Lighting and heating	40.00
Rent	120.00
Total	$1,473.60

Thus the actual cost to the pharmacist of dispensing these 10,000 prescriptions came to $1,473.60, and as he received for them the sum of $1,511.80 it follows that his net profit on all this work only amounted to $38.20. In the memorandum to the government it is pointed out that no allowance has been made in the above calculation for the work done by the owner, who in this case worked together with his assistant, nor is anything allowed for the inevitable breakages and losses which must occur either in compounding or in analyzing the drugs.

THE memorandum goes on to state that in an average business the returns may be divided into the following categories: Of the total turnover one fourth is derived from sick club prescription work, one fourth from private prescriptions, one fourth from counter sales, and one fourth from the sale of specialties. In poor districts, or in working class districts, the number of club prescriptions naturally predominates, and the other sales suffer correspondingly. From sick club prescriptions he derives no profit practically, as appears from the foregoing; the profits on the sale of specialties amounts to 20 to 35 percent., while the counter sales yield an average profit of about 40 percent. As the enormous sums paid for the privileged pharmacies are usually represented by mortgages averaging three quarters of the real as well as the fictitious value of the privilege and as most pharmacists are also greatly in debt, it is assumed that the total indebtedness of the Austrian pharmacies amounts to no less than $12,000,000.

CAN THE GOVERNMENT VIOLATE ITS OWN LAWS?

AN interesting case involving the legal and moral right of one branch of the government to violate the statute laws originating in another department was recently settled in New York in favor of the statute law, that is, the government acting through one of its branches can no more violate the laws of the land than can a private person. The case itself was not of great importance, but its lesson should be carefully noted by purchasers of socalled "government property" sold at auction, for, while the authorities may have the legal and moral right to sell condemned material the fact that such material was sold by the government will not protect the purchasers if he sells it to customers through either state or interstate commerce and it is found to be below the legal standard. It is a common practice of many departments of the government to sell stores and various materials condemned as unfit for use or as below its standards at auction to private purchasers, who undoubtedly expect to sell them again at a profit or make some use of them, but the decision in this case makes it clear that the fact of purchase from the government does not imply any exception of laws and standards in their sale by the purchaser. Here seems to be an inconsistency on part of the authorities; the government may sell a lot of drugs, we will say, of inferior quality to any purchaser who wishes to buy them, but if this purchaser attempts to sell them again he is held strictly to compliance with the regulations of the food and drugs act and is liable to prosecution and confiscation of the same goods sold to him openly by the government. It would seem far better if a consistent policy were pursued; that is, if goods of inferior quality are seized or condemned by the government authorities all such should be destroyed, or if sold be sold with the restriction

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that they be made use of in such a manner that they will not enter commerce in their original condition or be used for manufacturing only.

THE case in question arose from the proposal to sell at auction by the Isthmian Canal Commissioners a large lot of insect powder that had been condemned because of poor quality and deterioration through age. Prompt protest by local dealers in insect powder and their showing that the material fell far below the requirements of the Insecticide Act caused its withdrawal from sale and the lot, about 50,000 pounds, will either be returned to the Isthmus for such use as can be made of it or may be destroyed. Had not this protest been made it is very likely that this lot of worthless insect powder would have been bought by some well intentioned purchaser and distributed through trade channels, or unscrupulous parties might have been able by its purchase to seriously affect the reputation of this product or to enter into unfair competition with reputable dealers. It is all very well for government officials to say "We sell this condemned material for just what it is and offer no guarantee to the purchaser," but people do not usually buy things just for the amusement of bidding, and it is morally certain that some people will attempt to resell the condemned material at a profit through false representations or use it to cheapen the cost of some product at the expense of its quality. Especially in the case of foods and drugs should the authorities adopt a consistent and rigorous policy as to the public sale of inferior articles, permitting the sale of no condemned drug or food unless it is of commercial value for extracting active principles or can be worked up into products valuable for technical uses. Meanwhile let the buyer beware; the law will hold him for the final quality and purity of his products, and will give little consideration to any plea of innocence or ignorance of their source or from whom purchased.

"I'D RATHER HAVE THE CLERK WAIT ON ME"

WHILE standing on the street corner occupied by a drug store the following conversation between two well dressed women was overheard: "I thought you said that you wanted to stop in the drug store and get some sachet powder," said the first speaker. "So I do," replied her friend, "but I see Mr. Jones himself is in the store and I'd rather wait and have the clerk wait on me." "Why," was the question, "don't you like him?" "Oh, yes, Mr. Jones is a nice man, but he is awful stingy with his weighing and his clerk always gives me more than he does when I buy anything. Let's stop in on our way back and get a soda, the clerk will be there then."

AT first thought this might seem merely a laughable instance of the feminine desire for the best of a bargain, but when one stops laughing and begins thinking there is a whole lot to think about. Why should customers prefer to be waited on and served by a clerk instead of the proprietor of the store? Is it because the clerk is polite and attentive and the proprietor gruff and impatient, or is it because the clerk gives too liberally of his employer's goods, either through carelessness or from desire to attract customers to himself and show his employers what a good salesman he is? In either case it is time for the employer to study both his own methods and his clerk's and find out what is wrong. If his customers prefer to be served by his clerk because the clerk has better manners and is more polite and pleasing it is time he mended his own manners. If it is because the clerk gives ten cents' worth of goods for five cents it is time the clerk was taught the value of things and the bearing of net profits on the amount of his salary. Both conditions exist far too often and in too many stores and the chance conversation mentioned reveals the situation clearly.

THE experiment was tried of going into several typical corner drug stores and buying ten cents' worth of the same article at different times, once from the clerk and once from the proprietor, in both cases these being strangers. When the packages were weighed it was found that the lady mentioned by our correspondent was right in her statement; in eight out of the ten purchases made the packages weighed by the clerks averaged from one-eighth to one-fourth more than the weight of the packages handed out by the proprietors. Here is a leak in profits that is generally overlooked. True, the drug purchased was not expensive, but if the same liberal overweight is given by the clerk in everything the small margin of profit will soon be wiped out. There is no more reason why a clerk should give an ounce and a quarter of a drug selling for five cents an ounce to a customer than there is for him to give six two cent stamps for a dime, both cost money, yet apparently this is frequently done. Perhaps it is through carelessness, or, as already suggested, it may be done through a desire to appear more liberal and accommodating to customers; in either case the loss is double to the proprietor, for he loses both the goods and the good will of his customers. If the clerk had to pay for the goods he sold himself he would not be so liberal in giving away his profits.

BUT there is still another side to the story; does the proprietor allow business cares to render him cross and cranky and does he show his impatience with fussy customers or attempt to impress his superior knowledge upon others? Does he feel too busy to be polite or too hurried to spare the time to listen to talkative customers or to give courteous attention to complaints or questions? If he does, then it is easy to understand why people pass by his store when he is there and either make their purchases in another store or wait until his clerk is in charge and there to serve them. This would also explain the fact that when a clerk leaves him some of his best customers transfer their patronage to the rival store where his clerk finds employment. Both sides are well worth considering. If the preference for the clerk's service is based on his too liberal weighing or measuring this can be corrected by insisting on his observance of the store's schedules of quantities and prices, with the added injunction that as his salary depends upon the store's profits the less he wastes or gives away the better his chances for sharing in increased receipts. This argument is made use of in many trades; butcher shops, for example, pay their men in proportion to the amount of money they turn in from a given weight of beef, mutton, etc., and while its application to the drug business is not so simple still the clerk who knows that his salary depends upon getting full value for all supplies bought will not be so apt to be wasteful. If the preference is due to the better manners and attractive service of the clerk, let the proprietor be the one to take lessons. For a druggist to succeed *his* must be the personality that attracts trade.

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Legal Aspects of Pharmacy

BY HENRY M. FRIEDMAN, M.D., LL.B.,
New York

IN the commercialization of all the professions, the profession of pharmacy has suffered most. While it is true that the manufacturing pharmacists have received a great impetus in the last decade, they belong to the realm of chemistry and not pharmacy. The formation of the large corporation drug stores, with their large stock of merchandise of which little is pharmaceutical, has, however, almost entirely effaced the real pharmacy, except possibly in name. Yet pharmacy is a profession, for the state lays down laws for its regulation and exacts certain conditions from those who would practice it (1).

License and Practice

The right to regulate the practice of pharmacy is derived from the "police power" of the state. It is the power of the state, contrary to the constitutional clause prohibiting it, to "take" property without "due process of law." Restrictions placed by the state upon any pursuit or calling is a "taking" of property without "due process of law." In the interest of the health, welfare and safety of the community, however, the state may do this. The right to practice pharmacy is a privilege or license granted by the state to persons who have complied with the laws laid down by the legislature and enforced by a board of pharmacy, to whom the regulation of the practice of pharmacy is delegated.

Unlike the uniformity of licensing in other professions, in pharmacy the state issues various licenses, dependent on the locality and especially on the population of the localities for which the licenses are issued. In large centers only a pharmacist's license is issued. The educational and technical qualifications for this license are the highest, but the recipient may practice anywhere all the branches of pharmacy. In smaller communities, where the population is not in excess of a certain number, a druggist's license is used. The educational and technical requirements are less and practice is limited to these smaller districts. In small and sparsely settled communities, usually where a pharmacy is more than three miles distant, a storekeeper's license is issued, which allows the licensees to sell medicinal preparations but not to compound prescriptions. The constitutionality of the law which allows storekeepers to sell medicinal preparations yet prohibits the sale of similar preparations in large centers has been questioned. In most states it has been upheld on the ground that such discrimination is necessary for the health and safety of the people living in sparsely settled districts away from a pharmacy (2).

In the profession of law, and later also of medicine and dentistry, the former acting as a precedent, it has been decided that the license to practice these professions was a privilege granted to natural persons only and that corporations were not "persons" within the meaning of the act, but associations of persons, and were, therefore, not to be accorded that privilege. (3) With the tendency of the corporation drug store to crowd out the retail pharmacists, the latter have raised the same question, though the writer has not seen a court case on the subject. The pharmacy law on this subject is conflicting. In one part it says: "Except as prescribed in this article (which states the necessary qualifications for licensees) it shall be unlawful for any person to practice as a pharmacist, druggist, apprentice or storekeeper, or to *engage in, conduct, carry on* or *be employed in* the dispensing, compounding or *retailing* of drugs, etc." In another part it says: "Every place in which drugs, etc., are retailed . . . shall be under the personal supervision of a pharmacist, druggist, etc." The last clause nullifies the first, since it makes it immaterial who conducts, carries on or engages in the business as long as it is under the personal supervision of a licensed apothecary.

In the present day corporation pharmacy the prescription department is a comparatively small part of the business, probably because the public still requires a *personal element* in the compounding of its prescriptions—which is one of the reasons why the small pharmacist can exist at all. The household remedies, from which a large part of the revenues of the oldtime pharmacy came, have been replaced by various patent medicines, which are sold everywhere from a pharmacy to a grocery store. And while it has been held that it is within the police power of the state to prohibit the sale of household remedies except in licensed pharmacies (4), some states have held that this doctrine does not apply to proprietary or patent medicines sold in original packages, and that any such construction of the law was unconstitutional (5). The least that can be said against such a ruling is that it is not logical. The remedy, therefore, does not lie with the courts, for even if the matter were put squarely before the courts it is problematic how they would decide in any one given state. In one state—but on another point—the court even decided that the business was in fact the business of the licensed clerk in charge and that the real owner was not to be considered at all. But even if the courts were to decide in favor of the retail pharmacists, on this question of the right of corporations to practice pharmacy, astute lawyers could find many technical loopholes. So small a part does the prescription business play in some of these stores that the prescription department is sometimes leased away to individuals—a means, at any rate, that could be used in the event of an adverse ruling. Undoubtedly, however, the largest element in the responsibility for the establishment and fostering of these conditions is the increasing popularity of proprietary or patent medicines with the public, which are taking the places of the household remedies and even largely of the physicians' prescriptions. As long as the public adheres to this practice these conditions will, and must, continue. The reaction is on, however, and the public is being educated away from proprietaries; its continuance may mean a Renaissance in pharmacy.

Care and Skill Required of Pharmacists

While pharmacy, as a profession, has deteriorated—or possibly it might be called an elevation—into a business, the law requires in its practice a certain degree of care and skill not usually demanded of those engaged in more remunerative callings. An injury, the result of the lack of care or skill of the pharmacist, renders him liable to a suit for damages in favor of the one injured (6). The mere dispensing of the wrong drug is not sufficient evidence of lack of care and skill, but the plaintiff must actually prove this by affirmative evidence. An error in judgment is not inconsistent with such care and skill; the mere delivery of the wrong drug is not prima facie evidence of incompetence or negligence (7). Not the highest degree of care and skill attainable is required, but only a reasonable amount, and just what the term "reasonable" means is not clear. It is a good term to use in an effort to evade the question at issue. Whether the care and skill displayed were "reasonable" is a question for the jury to decide, and, since jury decisions are notorious for their inconsistency, the result of such suits in malpractice is always in doubt. Furthermore, a pharmacist is liable for the negligence or incompetence of his employees, whether licensed or not, but it is incumbent on the plaintiff to prove affirmatively the negligence or incompetence of the licensed clerk. Mere delivery of the wrong drug does not constitute a prima facie case. (8).

It is beside the question to discuss here the question of the justice of making the employer liable for the negligence or torts of the employee. It seems, however, that if the law allows an

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unlicensed person or corporation to conduct a pharmacy solely by reason of the employment of a licensed clerk, there does not exist between them the relation of "master and servant," and the employer should not be liable for torts committed by the clerk. As already stated it has been even held that the business was the business of the licensed clerk in charge—in such a state the employer surely could not be held liable for the negligence or incompetence of his clerk. Besides, if the law requires that only a clerk having a certain degree of competence, as evidenced by the license, be employed, it is unfair to hold the employer liable if the clerk has not the degree of competence required by the law to free one from liability. The law allows unlicensed persons and corporations, who are, therefore, not able to judge of the ability of their licensed employees, to conduct pharmacies, yet holds them responsible for the competence of these employees. Such employers have the selection and supervision of persons who do actual pharmaceutical work, while, according to the law, they cannot even sell the stock preparations requiring no knowledge of pharmacy (8). This is a condition existing in no other business. Truly a revision of the pharmacy laws is urgent.

Substitution and Adulteration

On this subject the law says, in essence, that an apothecary adulterates or substitutes who delivers to his customer a drug or medicine which falls below the standard he professes them to have as to strength and purity, or if sold under a standard presented by the National Formulary or a pharmacopœia, it falls below the standard prescribed; in the case of substitution, if he gives another drug than the one demanded or puts an ingredient into a medicine which differs from the requirements of the formula under which it is made (1).

No apothecary can be prosecuted for adulteration or substitution who can prove at the trial or hearing that he bought the drug under a guaranty from the manufacturer or jobber and that he did not himself do the adulterating. The guaranty must state the name and address of the jobber or manufacturer and must specifically refer to the drug or drugs guaranteed. If the apothecary breaks the original package and sells in bulk he is liable, since he is presumed to know the quality of the drug he sells; consequently it is no defense that he received the said drug in that condition (9).

A manufacturer is liable to the ultimate consumer for an injury sustained by taking medicine bought in the open market—that is, from the retailer, if that medicine was a poison, on the doctrine that one who sells a dangerous article owes a duty to the whole community to exercise care in its manufacture or sale and is liable to any one injured thereby. Ordinarily liability would extend only from manufacturer to the next buyer and not to third persons or consumers. Every wholesaler or manufacturer is responsible for the quality of the drugs he sells. All members of a partnership and their general agents, all directors of a corporation and their general agents, are individually liable for a violation of the law in this regard (1).

The National Food and Drugs Act of June 30, 1906, prohibits the shipment, receipt or possession of any adulterated articles. The court held that the receipt in unbroken packages of adulterated articles for the purpose of testing and properly labeling is not a violation (10).

While an apothecary cannot adulterate or substitute under any circumstances, yet, *"except in the case of prescriptions," where it would be tantamount to practicing medicine,* he *can* recommend the use of another article than the one demanded and sell the same with the knowledge and consent of the buyer (1). The law, therefore, put its "O. K." on the "just as good" apothecary.

Relation of Medicine to Pharmacy

While there may be nothing of the legal in the relation between the physician and the pharmacist, yet in the large centres, at least, their interests are closely interwoven. The bone of contention between the two professions has ever been the question of where one's sphere ends and the other's begins. It is the question of office dispensing and counter prescribing.

Legally, the pharmacist violates the public health laws if he actually or by suggestion prescribes or advises for the ills of his customer (11). He may sell what is demanded, if not otherwise prohibited by law; but any medicinal advice, whether supplemented by the sale of drugs or not, is a violation. When the druggist is called upon to give "first aid" treatment—as he so frequently is—he has only that same right to give such aid as any other lay person has, to relieve suffering or to save life when medical attendance cannot be obtained. The apothecary has no special right, by reason of his calling, to give such aid.

The evil, however, does not lie in the emergency treatments which the apothecary is called upon to give, but in the indiscriminate counter prescribing, for the purpose of making a sale; advice asked for by the customer in order to escape the payment of a physician's fee—and the customer gets just about his money's worth—which is nothing at all.

For the same reason that an apothecary is justified in giving emergency aid in the absence of medical care, the physician may do his own dispensing in the absence of a pharmacist, as a physician must do in sparsely settled districts. Not because it is the best way, but because it is the only practical way. He can, however, only dispense to his own patients while they are under treatment and not to third persons; he cannot dispense or sell medicines independent of treatment without an apothecary's license. Were the law prohibiting the sale of medicinal preparations except by licensed persons properly enforced, one class of quacks at least—those who sell medicines to individuals at retail (to which the pharmacy laws apply)—might be forced out of business. It is highly improbable that these persons could obtain licenses even if they cared to do so. Besides, even if they did obtain apothecaries' licenses they could not sell in their own states outside of the counties in which they were registered. The federal law on interstate commerce only requires that the preparations be not misbranded, etc., but does not, of course, require licenses. The medicine quacks depend largely on absence and distance for their victims, and were a strict interpretation given to the licensing laws another element in the restricted income of the pharmacist would be corrected. Unfortunately, it seems that the illegitimate interests have a woeful disregard for the law.

Likewise, in communities with many pharmacies, there is no excuse for the physician dispensing except in emergencies. There can be no doubt that the proper compounding of medicines is an art, and, like all arts, must be specialized. No physician can look after his practice properly and compound his own prescriptions with any degree of accuracy. As a matter of fact the dispensing physician never compounds his own medicines, but buys ready made preparations—the cheaper the better—which he knows by trade name only. He makes his patients fit the pills rather than the pills his patients. He would be disagreeably embarassed were he asked to name the ingredients of the preparations he dispenses. Many of these physicians dispense the samples with which every physician is deluged. If it does no other good it saves buying medicines. The scientific physician needs the aid of the pharmacist in having his prescriptions properly compounded. Even in medicine is variety the spice of life; it is only by calling to his aid the pharmacy, with its great variety of drugs, that the physician can apply any new medication that he thinks appropriate.

The Prescription

It might almost be said that the *sina qua non* of pharmacy is the prescription. At any rate, it is the strong tie which binds the physician and pharmacist together. What, then, is a prescription? A prescription is a request or order drawn by the physician on the pharmacist to deliver to the patient the medicines set forth thereon. It is what the bill of exchange or draft is to the business world. Just as with the draft, the patient cannot have both the prescription and the medicine—in the case of the draft, the money; just as with the draft, the one on whom it is drawn, the apothecary, need not accept or fill the prescription, in which case the ownership remains with the patient, and

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so remains until given to a druggist for compounding. An apothecary is not liable to a physician for refusing to fill the latter's prescription, since that would be an interference with the conduct of the former's business (12).

In the light of the definition of a prescription, to whom of the interested parties does the prescription belong? On this question the courts have given no direct answer. In some states the law requires that the apothecary keep, properly index and file all his prescriptions and produce them in court when so ordered (13). The court cannot, however, compel the production of all prescriptions, but must specify the ones wanted—say all those from a certain physician (14). In such states there can be no doubt that the ownership of the prescription lies with the apothecary. Furthermore, it is an accepted principle that a prescription is not such a confidential or privileged communication between a physician and his patient that its production in court cannot be compelled (15). If, then, the prescription is not a communication or transaction between physician and patient the latter cannot claim it on that ground at least. Besides, it should be remembered that a patient who consults a physician does not do so merely to get a prescription. Very frequently he gets none at all. Neither does the whole treatment resolve itself into one. Unless the patient specifically barters with the physician only to get a prescription—that is, a formula, he cannot lay exclusive claim to it. Indeed, in view of the laws prohibiting the refilling of prescriptions containing opium, etc., a person can have no exclusive right to a prescription other than to the mere paper (1). Moreover, merely obtaining a formula from a physician is not really a prescription in the sense that a prescription is a ministration for a particular person, for a particular ill at a particular time.

Ordinarily the patient merely acts as a messenger between the physician and the apothecary. If the physician told the pharmacist verbally what to compound for his patient—which he has a perfect right to do and very frequently does—there could hardly be a prescription to demand. To demand a copy is another question. If the patient had any inherent right to the prescription the law could not prohibit the refilling of certain ones without the consent of the physician, who has a right to direct that none be refilled by so stating, whereupon the apothecary must follow these directions (1). The patient can be left out of the question of the ownership on the ground that he does not contract with the physician to get a prescription and because the prescription is a communication between the physician and the apothecary which does not concern the patient further than the receipt of the medicine intended for him.

Now, as between the physician and the pharmacist, the question can only be determined by the law on ownership of documents, manuscripts or letters. The substance of a letter—not the paper—always belongs to the sender or author. Even independent of the copyright laws the recipient cannot publish or disclose the substance of the communication without the consent of the author. Thus the substance of the prescription—the formula—belongs to the physician. Except by order of the court its contents cannot be disclosed, and the pharmacist cannot refill or publish a formula or prescription without the consent of the physician. The paper on which a communication is written always belongs to the recipient, so it is also with the prescription—it belongs to the pharmacist.

It has been held by the courts that a prescription is not such a legal document that its alteration to "give it a fictitious appearance of genuineness" constitutes the statutory crime of forgery (16).

While on the subject of prescriptions it might not be amiss to comment on the notoriously illegible prescriptions with which only pharmacists have to battle. That so few accidents occur is a glowing tribute to the efficiency of the pharmacists in general. Why the physician should be such a bad penman has received many explanations. Beside the complimentary ones, the college lecture note taking habit is perhaps the largest responsible factor. Students will sit for hours and take notes, legibility being no object. These "tablet" lectures save the student the necessity of reading more voluminous books, but forever destroy his penmanship. Such a discussion, however, is beside the question.

The pharmacist is particularly interested in the legibility of a prescription because he is also liable with the physician for an injury the result of dispensing a drug inherently dangerous in quality or quantity. An apothecary is presumed to know the morphology and action of the drugs he dispenses; he is not merely a "rubber stamp," to follow blindly the directions on a prescription. He is not expected to inquire into the merits of the treatment, but should be wary about dispensing inherently dangerous drugs. In this way the pharmacist is a check on the physician. It has been held by the courts that if a pharmacist, through the illegibility of a prescription, has dispensed a wrong drug—not inherently dangerous—he is not liable for the injuries resulting therefrom (9). The physicians would do the pharmacists, and especially their patients, an act of charity were they to pay more attention to the legibility of their prescriptions. All "great" men do not write badly. At any rate, for the sake of those vitally concerned, they should sacrifice "greatness" for legibility.

Compensation of Pharmacists

The compensation of pharmacists is dependent upon the ordinary rules of contract or agreement. In the absence of an agreement the pharmacist is entitled to a *quantum meruit*—the reasonable value of the services rendered. As in the case of other pursuits whose practice is only permitted after license, no compensation can be recovered unless, before the rendition of the services, the apothecary was regularly licensed and registered (17).

Revocation of License

The license to practice pharmacy can be revoked by the Board of Pharmacy for the commission of a felony, addiction to alcohol or drug habits, and for the *repeated* and *wilful* violations of the Public Health Laws on pharmacy, such as adulteration, substitution, allowing clerks to work more than the prescribed number of hours, etc. (1).

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2. 197 N. Y. 353, affg. 122 A. D. (N. Y.) 889; 106 N. Y. S. 1146.
3. 195 N. Y. 102; 198 N. Y. 479.
4. 122 N. Y. S. 655; 138 A. D. (N. Y.) 12.
5. 187 Ill. 587.
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7. 77 Atlantic 405; 52 Ky. 239.
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12. 46 La Ann 1368.
13. 38 Southern Rep. 739.
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N. B.—These references are to cases reported in the various State, District or Federal Law Reports. The numbers before refer to the volume number; the numbers after refer to the page.

736 Home Street.

Scammonium.—A good preparation of brown scammonium resin should lose not more than 3 percent. in weight on heating at 100° C. to a constant weight. It should be soluble in 66 percent. ether up to at least 95 percent., in 95 percent. alcohol should be 98 to 99 percent. soluble, in chloroform 90 percent., in carbon disulphide 5 to 6 percent., in benzine 5 to 6 percent. and in turpentine practically insoluble (Jour. de Pharm. et de Chim., 1912, No. 3-5). The melting point should be between 118 and 122 degrees. The rotary power of a 4 percent. solution in 95 percent. alcohol is —20 to —23.5 degrees. The rotary power of the ether soluble portion is somewhat higher than that of the insoluble residue and therefore higher than of the resin itself. The ash should be no higher than 0.25 percent., acid index at most 21, saponification index at least 235. Sulphuric acid should bring out no red or pink color.

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THE PROPER METHOD OF MAKING SATURATED SOLUTIONS[1]

By J. Leon Lascoff, Ph. G.,
New York.

INASMUCH as I am to take up the subject of saturated solutions in general, I shall lay the greatest stress on the most important and most generally prescribed salts, the iodides. Potassium iodide solution in saturated form has been most troublesome to the dispenser and unsatisfactory to the physician, and as the iodides are very important drugs, with distinct physiological action, I feel that we pharmacists should know just exactly what the saturated solutions of the iodides are, and how to make them. Potassium iodide is so generally used that German medical students say, "if in doubt what to prescribe, give potassium iodide." Its use in this country is no less general.

My object in presenting this paper is not to criticise brother pharmacists for their inability to dispense properly made saturated solutions, but to point out that some delinquencies do occur, and that improper methods are used by some pharmacists when a prescription calls for a saturated solution of a salt.

We must first inquire, What is meant by a saturated solution? A saturated solution is one in which there is dissolved the maximum quantity of a salt or chemical capable of permanent solution in the solvent. The United States Pharmacopœia gives the exact or the approximate solubility of every salt recognized and there is no reason why what purports to be a saturated solution should be deficient by 10 or 20 percent., or as much as 50 percent. A shortage of 5 percent. is excusable, but a greater shortage is unpardonable. I believe that the delinquencies that occur in making saturated solutions of the iodides and the bromides are due principally to the following causes:

1. Impurity of the salts, especially the iodides.
2. The careless methods followed in dispensing the solutions.
3. Incorrect weights and measures.
4. Working at the wrong temperature.
5. The use of containers of the wrong size.

It is natural that the pharmacist should buy his merchandise at the most reasonable prices possible, for which nobody can blame him, but, as I have stated on other occasions, in buying drugs or chemicals the quality should always be the first consideration. By this I mean that a chemical of highest purity purchased from a reputable house is not too dear, even if it costs a few cents more than an article of inferior grade full of impurities. If in doubt concerning the purity of a chemical salt, the pharmacist can apply the tests for impurities given in the U. S. P., which are very simple. The factor of solubility alone will protect him in many instances, so that he will be able to distinguish a pure chemical from an inferior one.

Some pharmacists dissolve the salt by rubbing it in a mortar; some by putting the salt in a bottle, adding enough water to fill the bottle, when to their great surprise they find, especially in making a solution of potassium iodide, that a lump is formed which it sometimes takes hours to dissolve. Some effect solution by stirring the salt and water in a graduate, and some are accustomed to put the salt into a funnel with absorbent cotton and dissolve it by percolation. The result of this latter method is that a part of the salt is apt to remain undissolved in the cotton, and in this case the finished product will be deficient in strength.

The proper way is to put in the bottle the proper amount of water by weight, and add the salt little by little, constantly shaking until it is dissolved. There is absolutely no waste by this method, and the time required is very short. Sometimes a white precipitate may form, especially in making a solution of strontium salts. Such a precipitate can only be due to the presence of impurities.

Frequently old weights are used which constantly diminish from polishing and cleaning and eventually become a great deal lighter than they should be. This was brought to my notice once when an old 2 drachm weight was found to be 20 grains short. Only certified graduates should be used in dispensing, as other kinds vary in capacity. Sufficient distinction also must be made in the use of the metric system and the troy and the avoirdupois weights.

The correct temperature for making saturated solutions is 25° C.

Insufficient strength is due sometimes to the variations in the size of the bottle where the bottle is used as a measure of capacity. It is a well known fact that some ounce bottles hold by volume only 7 drachms, while some hold 9 or even 10 drachms. The bottles used in making solutions of the iodides should be of amber color, as the U. S. P. orders the salts of iodine to be kept in dark bottles. While a good many pharmacists are under the impression that a physician when prescribing a saturated solution means that each drop should represent one grain of the drug, this is, in reality, not the case.

The Correct Process

The most accurate way of making saturated solutions is by weighing both water and salt, shaking until dissolved, and straining. For instance, 10 parts of potassium iodide are soluble in 7 parts of water by weight.

In order to make a saturated solution of potassium iodide, take 996 Gm. of potassium iodide and enough water to make 1,000 Cc., or 456 grains of the iodide and enough water to make one fluid ounce.

The salts that are most frequently prescribed in saturated solution are the iodides of sodium, potassium, strontium and ammonium; the bromides of sodium, potassium and strontium; boric acid; epsom salts; the chlorates of potassium and sodium and potassium permanganate.

Herewith is given a table of figures which are approximately correct as to the number of grains of each salt required to make a fluid ounce of a saturated solution at 25° C. The United States Pharmacopœia generally gives the solubility only approximately, but through practical experience in making saturated solutions of salts from different manufacturers, I am able to present the accompanying table of definite quantities:

	Grammes to make 100 Cc.	Grains to make 1 fluid oz.
Pot. Iodide	99.6	456.
Sod. Iodide	127.5	584.3
Stront. Iodide	114.9	526.
Pot. Bromide	50.40	230.
Sod. Bromide	72.09	329.
Pot. Chlorate	5.69	26.
Magnes. Sulph.	56.32	260.

We must bear in mind the importance of knowing the exact solubility of the different salts, as any shortage would decrease the dose prescribed by the physician. Though the process of making this kind of a solution seems simple enough, we find some pharmacists who pay little attention to the subject. The records of the Board of Pharmacy show many violations of the law due to the deficiency of salts in saturated solutions. I do not say this in any official way as a member of the Board of Pharmacy as the secretary of the Board will very likely refer to the subject in his report. Personally I should like very much to see this kind of violation of the pharmacy law stopped, especially when the deficiency is due to the careless methods employed by some pharmacists. If the physician would prescribe the stated percentage, say 50 percent., 25 percent., etc., I am sure the average pharmacist would make no error nor overlook any details, neither would he make any attempt to economize on the drugs, but so long as the saturated solution is prescribed it should be made according to the standard of solubility as it is laid down in the United States Pharmacopœia. A little patience, proper materials, utensils, and strict attention to the work at hand, are the chief requirements in making saturated solutions correctly.

[1] Read at the Rochester meeting of the New York State Pharmaceutical Association.

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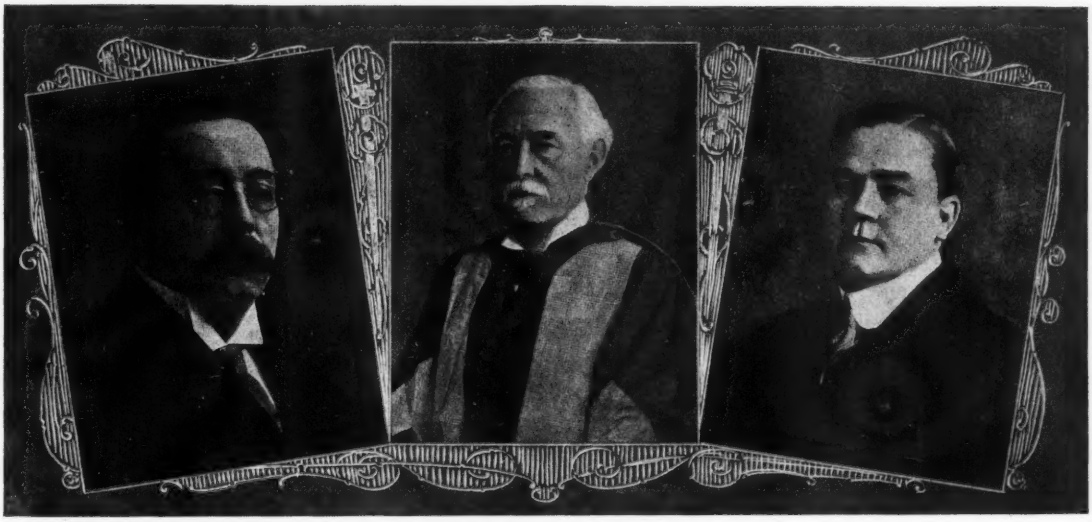
The Fairchild Postgraduate Lectures



PROF. W. H. PERKIN, Ph. D., Sc. D., LL.D., F. R. S. SIR WILLIAM A. TILDEN, D. Sc., LL.D., F. R. S. JOHN C. UMNEY, Ph. C., F. C. S

THE FAIRCHILD POSTGRADUATE LECTURERS.

IN May, 1911, a number of leading pharmacists of London tendered a dinner to Samuel W. Fairchild, of New York. During the course of an address at this dinner, Professor Crossley spoke of the need for postgraduate work at the school of pharmacy. Mr. Fairchild at once undertook to pay the cost of a course of postgraduate lectures, and as a result five lectures on the essential oils were given at the Bloomsbury Square School this spring by the three distinguished men whose portraits are presented above. Abstracts of the lectures are given below.

THE HISTORY AND CHEMICAL RELATION OF THE TERPENES

By Sir William A. Tilden, Ds. C., LL.D., F. R. S.

The first of the lectures in the series was delivered by Sir William A. Tilden, the distinguished research chemist, who devoted his remarks largely to a review of the researches into the chemistry of the terpenes during the past thirty years in which he had taken a very important part. He defined essential oils in a general way as compounds of a terpene and some other substance, a resin, ketone and alcohol and ester or some such body. The essential oils, he explained, owed their characteristic odors generally to the other substance present, not to the terpene. The first laboratory product of chemical operations conducted upon these substances was the compound known as artificial camphor, produced by the action of hydrogen chloride on turpentine oil. Sir William reviewed the outline of the growth of organic analysis, based on Liebig's method of combustion, pointing out the results of the studies of Dumas, Blanchet, Sell, Berthelot and Deville, whose early work laid the basis for later studies in organic analysis. Up to 1875 it was known that the turpentines and essence of lemon and some other compounds of a similar nature were all expressed by the formula $C_{10}H_{16}$. In 1874 Sir William himself took up the study of the hydrocarbons and after long, tedious investigations carried on with the aid of Mr. Shenstone, he divided the terpenes into three classes—the turpentines, the citrenes and sylvestrene. By 1887 eight distinct turpenes were known, and this number has been added to very materially since that time. The lecturer spoke of George Wagner's bold speculations regarding the constitution of the hydrocarbons which have to so large an extent been verified by later observations. He then reviewed the work of Prof. von Baeyer, of Munich, on the constitution of benzin and its derivatives and on the orientation of terpene compounds. Wallach's work on the terpenes was also outlined and the general deduction based on all this research was set forth in the constitutional formula of thirteen of the terpenes.

THE SYNTHESIS OF THE TERPENES

By Prof. W. H. Perkin, Sc. D., LL.D., F. R. S.

In the second lecture of the series, which was delivered by Professor Perkin, the author spoke of the debt owed to Sir William Tilden for his studies in connection with the nitroso chloride reaction. He reviewed the constitutional formulas which had been assigned to the several terpenes and told of his own work in connection with the synthesis of the terpenes which had been undertaken during some experiments on the constitution and synthesis of camphor and its derivatives. The third lecture was also delivered by Professor Perkin and was a continuation of the first, dealing in detail with the constitutional formulas of the various terpenes and the methods which have been pursued in their synthesis.

ESSENTIAL OILS: THEIR CONSTITUTION AND COMMERCE

By John C. Umney, F. C. S.

Mr. Umney, who since these lectures were delivered has been elected president of the British Pharmaceutical Conference, after expressing his thanks to Mr. Fairchild for the generosity which made the series of lectures possible and his appreciation of the honor done him by associating him with such men as Sir William Tilden and Professor Perkin, began his lecture with reference to his experiences as a youth in Martindale's pharmacy and of the

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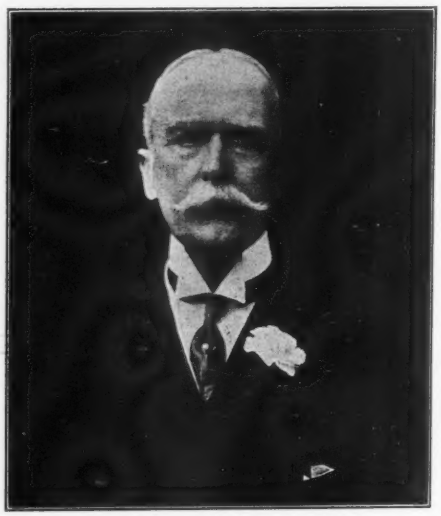
interest in essential oils which he had continued to feel since that time. He reviewed at some length the history of the essential oils from the earliest references in Egyptian papyri down to the present time, illustrating his lecture with numerous lantern slides, reproducing old woodcuts and modern photographs. He referred in passing to the occurrence and function of the oils in the plant and described the various methods pursued in their extraction. He classified the various oils in accordance with their most important constituents and paid high tribute to the work of Wallach and his pupils in their effort to establish for all really distinct terpenes such sharp and clearly defined characteristics that the recognition and separation of chemical individuals became possible. He then pointed out the use which had been made by adulterators of the knowledge gained by scientific study concerning the odorous principles of essential oils. One of the first adulterants used on a large scale was, he said, one of the most barefaced; it consisted in the preparation of glyceryl acetate on a huge scale for admixture with peppermint oil, an addition which was difficult to detect. He took occasion to enter a strong protest against the theory "that has been put forward in America" to the effect that there is no harm in adding to an oil deficient in a particular chemical constituent that same constituent in a pure form obtained from another oil. He pointed out that under this theory it would be permissible to take eugenol from cinnamon leaf oil and add it to bay oil, which is four or five times the money value.

In the fifth lecture, being the second delivered by Mr. Umney, he first took up a study of the rose series, including not only oil of rose but also oils of geranium and of citronella. He described the constitution of these oils and the method of extracting them and preparing for the market. He next deal with the linalol series, the principal members of which are the oil of linaloe and oil of bois de rose, the principal constituent of which is linalol. In this group were also included the oils of lavender, spike lavender, neroli and bergamot, or rather these latter oils were mentioned as containing linalol compounds. The next series of oils were those in which borneol, mostly in the form of bornyl acetate, was the most important constituent. Among these were named the oils of pinus sylvestris and of rosemary. The next group taken up was the eugenol series, including the oil of cloves, of cinnamon leaf, and pimento. Among the thymol series the oil of thyme is the most important member. The cynamic aldehyde series, including the various cassia oils, were next treated of. The citral group, including all the messina essences and lemongrass oils, was next taken up. This was followed by a description of the carvone series, the cineol, the menthol, anethol, the terpene and the sesquiterpene, the benzoic aldehyde, and the saffrol series. He then discussed the terpeneless oils, pointing out the limitations to this class of preparations and their advantages. Reference was then made to the antiseptic value of many essential oils, origanum oil, for instance, being twenty-five times as powerful an antiseptic as absolute phenol. Brief reference was then made to the medicinal esters and the whole subject of synthetic perfumes was reviewed.

Mr. Umney pointed out the wide range of countries which contributed the supplies of essential oils and questioned whether any other trade levied such a worldwide tribute.

Both of Mr. Umney's lectures were liberally illustrated with lantern slides showing the growth of the plants and the various processes used in the preparation of the oils.



SAMUEL W. FAIRCHILD, Ph.M.,
Of Fairchild Brothers & Foster, New York, founder of the Fairchild Scholarship and the Fairchild Postgraduate Lectures.

A Royal Pharmacist

According to R. A. Sinca, in the Pharmaceutical Journal, there is a volume of Henry the Eighth's own time still preserved, containing a large collection of recipes for plaisters, spasmadraps (dipped plasters), ointments, waters, lotions, decoctions, and poultices, made by the King himself and his physicians. It begins with the "King's Majesty's Own Plaster." The ingredients of these recipes, although in varying proportion, are much the same in kind. They consist of the roots, buds and leaves of different plants, raisins without stones, linseed, quince seed, vinegar, rosewater, long garden worms, malmsey and white wines, Armenian bole, "lytherge" of gold and silver, scrapings of ivory, pearls finely powdered, red lead, and red coral, honeysuckle water, the suet of hens, and the fat from the thigh bone of a calf.

The ointments of the volume are fifty in number, and fifteen of these were devised and made by the King. One plaster is of special interest. It is entitled, "A Plaster for my Lady Anne of Cleves to mollifie and resolve, comfort, and cease payne of cold and wyndie causses," but no indication can be gleaned as to whether the King or his physicians devised it. His Majesty was equally mindful of his poorer subjects, for amongst the manuscripts of Sir Hans Sloane is a recipe devised by the King, and sent to the Lord Mayor of London, entitled a "Remedy against the Plague." The following is almost a literal transcription: "Take a handful of marygolds, a handful of sorrel, and a handful of burnett, half a handful of fetherfur, half a handful of rue, and a quantity of dragons of the top or else of the root, and wash them clene in running water, and put them in a pot with a potell of running water, and let them seethe easily, from a potell on to a quart of liquor, and then set it back till it be almost cold, and strain it through with a fine cloth and drink it, and if it be bitter, put thereto sugar, and if it be taken before the purpulls do apere, it will hele the sick person with God's grace."

Royal advice concerning the sweating sickness is the main theme of a letter which may be seen in the British museum written by Sir Brian Tuke (the Royal Secretary) to Cardinal Wolsey. Henry recommends small suppers and little wine, and once in the week to take the pills of Rasis (an Arabian physician). If the disease should appear, to sweat the full time without suffering it to run. Then, with a posset ale, having certain herbs clarified in it, taken frequently, his Grace was of opinion that the disease would easily be overcome.

Toxic Effect of Menthol on Infants

Lublinski (Berlin Med. Review, 1912, 15, 2, 571) confirms previous reports of the marked toxic effect of even small amounts of menthol on children under two years of age and points out the danger of its use for such patients in sprays or douches or as a local application. He mentions a case of a child eleven months old which was seized with violent convulsions and laryngeal spasms following the administration in the nostrils of a small quantity of an ointment containing two percent. of menthol, artificial respiration being necessary to restore it. The toxic action of menthol is specially marked in its effect on respiration, laryngeal spasm of a serious nature following its use in numerous cases when administered locally to infants, several of these cases ending fatally.

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The Autobiography of a Druggist

BY JAMES A. SYMINGTON, Ph.G.

(*Continued from page 282.*)

THE relations existing between my assistants and myself are perhaps deserving of a few lines. To begin with, I never referred to them as "clerks" or "employees." Somehow the title of assistant appealed to me as more genteel and it also found favor with them. I always endeavored to establish friendly relations with them and generally succeeded. It was not sufficient for me to know the name and address of my assistants and to get, if possible, references from the last employer. I endeavored to learn, by straight and direct inquiry, about their family and marital relations; number, sex and age of children, if any, personal hobbies, etc. This was never done in the way of satisfying mere curiosity, but with a view of getting closer to my assistants. Not infrequently my wife and I would invite one or the other of them to the house for dinner; if a married man we always included the whole family in the invitation; and we did not hesitate to accept a return invitation when extended to us by one of our married assistants, a thing which happened quite often. We always encouraged our assistants to come to us for advice or counsel in any matter in which they might deem our advice necessary or useful. In the store we never made any changes of importance without talking it over with the force, and on such occasions a general meeting was held, frequently after closing time, at which every member of the force from oldest assistant to youngest apprentice, was encouraged to voice his views.

The hours of work were so arranged, long before I was compelled to do so by any pharmacy law, that no assistant worked more than eleven hours out of the twenty-four; a man's day off was sacred and only extreme necessity was ever permitted to interfere with it. Pharmaceutical papers, a goodly number of which were always subscribed for by the store, were assiduously read and interesting articles were pointed out to each other and frequently discussed. But the most essential feature of the assistant question has always seemed to me to be the matter of the selection of "juniors." I made it a rule to bring up my own juniors. The method generally followed in this country of getting a junior with some experience by advertising in the daily papers, and then setting him the task of doing the work and saving the salary of a registered assistant has never appealed to me. I clung to the old-fashioned way. I would look for a boy just out of high school who desired to become a pharmacist. Having found such a youth I would request him to bring his parents or his guardian to me. To them, boy and parent, I would explain all the advantages and all the disadvantages of his future profession. I would point out the seriousness of the calling, the hard work, the necessity for close application and careful study, and would assure him that he would not be called upon to perform any work which I had not done myself or would not be willing to do again should necessity arise. I would tell him the story of my own apprenticeship; and I believe it would not be out of place to repeat the same here, although it is the same story that any number of other pharmacists could tell as well or better than I.

I was born and educated in Germany. Having passed my "Abiturienten Examen" in the Gymnasium (about the same as graduating from college here) I was hesitating between pharmacy and medicine, both professions being at that time highly esteemed, remuneration being somewhat quicker and the study a little less expensive in the field of pharmacy than in that of medicine. As I had always had a strong leaning toward chemistry I eventually decided in favor of pharmacy, my parents having left the choice entirely to me. Arrived at this decision we now began a careful perusal of the announcements in the pharmaceutical journals for apprentices wanted. I may state here that to look in the daily papers for a position in a pharmacy or to insert therein an advertisement to that effect is something unheard of in Germany. Vacancies are announced in the pharmaceutical press from one to three months before the position will be ready for occupancy. Having looked over the various opportunities offered to prospective apprentices carefully worded applications were penned by me and mailed, accompanied by copies of school credentials, a photograph of myself and a letter of consent from my father, together with references as to my father's standing in the community. In due course of time some replies were received and from these the position seemingly offering the best opportunities for studying and working under the direct supervision of the "Herr Apotheker" was selected. Now some more correspondence ensued (the position in question was at the other end of the empire) and eventually a contract was drawn up between my future preceptor and my father. According to this contract my father bound himself to apprentice me to Herr Apotheker ....., in ....., for the term of two years (I being an Abiturient, having to serve only two years' apprenticeship against the three years required of one who had only attained his "Einjaehrige Freiwillige Zeugniss").

During these two years my father contracted to support and maintain me, all moneys going through the hands of my employer; to pay annually the sum of 300 Deutsche Reichsthaler (about $225) as tuition to my employer, and to forfeit a like sum should I wilfully and without the consent of the latter leave my position before the expiration of the period contracted for. Furthermore my father had to give the right and the privilege of parental discipline (including the privilege of administering corporeal punishment) to my employer. In return my employer bound himself to watch over me like a father, to provide me with lodging and breakfast during the term of my apprenticeship, and to direct, supervise and train me in the art and science of pharmacy. All this being duly drawn up and sworn to before a notary, the money for my first year's tuition being forwarded by mail, I was now at liberty to enter upon the journey which would bring me to the city of future activity as an embryo pharmacist. Arrived there I was met at the station by my preceptor, who conducted me to the Apotheke and showed me to my room, which I shared with one of the assistants. After removing the traces of my long voyage I made my official call on my preceptor and was then introduced to the Herr Provisor (head clerk, the Gehuelfen (assistants), and the other apprentices in the order of their respective seniority. A "Pension" (boarding house) was then recommended to me, where I made arrangements for my mid-day and evening meals. The rest of the day was granted to me for the purpose of getting acquainted with the city, one of the apprentices being detailed to act as guide and guardian. The next day a detailed plan of my work and studies was handed to me and my activity as "Lehrling" (apprentice) began.

I had to be down at 8 o'clock in the morning, run up the iron shutters covering the windows, clean up the store, and do practically all the porter's work, except washing the floor and the windows. The next youngest apprentice supervised and partly assisted in the work. Bottles had to be washed, drawers and stock bottles filled and packages for counter sales made up. No drawer was opened, no bottle taken down from the shelf without first reading the name out aloud. Every package had to be weighed accurately. No waste was permitted. Old twine was rolled up and saved. Old newspapers were cut up and used for wrapping up everything except prescriptions. For these and for

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these only new wrapping paper, cut into appropriate sizes, and new twine were used. Every old bottle had to be carefully washed, the trimmings from filter paper and bird shot being used as cleansing agents, combined with a little soap, much water and plenty of elbow grease. I will never forget the homesickness to which I fell victim, when, having washed a whole bunch of second-hand wine bottles, standing in a drafty hall and using cold water, on a raw fall day, the Herr Apotheker came along, picked up one of the bottles, looked at it, found a speck of dirt which had resisted my efforts at removal, or had been overlooked by me, and ordered me to do all the bottles over again. I will admit that I broke down and cried like a baby. My preceptor saw it and addressing me in tone of kindness which I shall never forget he told me that it was not his object to save the price of a porter nor to harrass me unnecessarily that I was told to do these things but to teach me how to do everything in a pharmacy, and how to do it right, so that when it came my turn to teach others I would be in a position to teach them correctly and to judge their work properly. Of course, I had to wash those bottle again, but I did it with a much lighter heart; I understood.

Every day two hours were devoted to theoretical instruction, while practical instructions were given as we worked. Regular shifts were assigned for work at the counter, in the stock room, in the laboratory and in the prescription department; always under the supervision of a trained and licensed assistant. Once a week the apprentices went out botanizing. The plants gathered were then dissected, their family, genus, etc., ascertained, with the aid of the preceptor, and preserved in a herbarium with the necessary data noted beneath each plant, etc. A laboratory journal was kept and everything done in the laboratory, from making distilled water to assaying drugs and testing chemicals, was carefully recorded. In brief, the training given us embraced everything from washing bottles to the manufacturing and testing of chemicals. We were permitted to attend certain lectures, selected by our preceptor, as "hearers" at the University; and while this attendance did not count toward the required two years of university study it materially assisted us in our preparation for and efficiency in passing our "Gehuelfen" (assistant's) examination. One afternoon a week off was our own, but we had to be back in our rooms by 10 o'clock at night, unless special permission was granted to stay out later. Once I overstayed by half an hour and was deprived of my afternoons off for four weeks to expiate my enormous crime. Take it all in all, our training was thorough and well supervised and I have never regretted a single hour spent as apprentice.

While not following out all of the particulars of the German training, I embodied all such features as were applicable to American standards in training my own apprentices. I felt that I owed to them as well as to pharmacy in general the duty of making good pharmacists out of them, and I may state without fear of being accused of bragging that I have turned out a few young men who are an honor to the profession. Selecting my raw material carefully in the first place, taking only boys who had a good education to begin with and who came from good stock, I experienced no difficulty in getting them to see the advantages and the necessity of doing all that they were asked to do. Now, many years since I trained my first apprentices, I often have the pleasure of welcoming some of my old apprentices, now in business for themselves, as visitors at the store or in my home, and many is the hour we have passed in pleasant reminiscences of the past.

(To be continued.)

Preservation of Rubber Goods

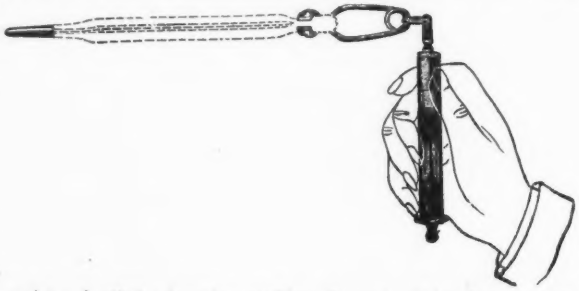
Michailovsky has discovered (Rousky Vratch, in the New York Medical Journal) that rubber articles may be preserved for long periods by covering them with powdered naphthalin. He sprinkled napthalin on rubber tubing and placed it in a glass jar. Three years later he found the tubing in perfect condition.

New Form of Solid Carbon Dioxide

A new preparation of solidified carbon dioxide has been suggested by W. K. Sibley (Practitioner, July, 1912) in the form of a solution of solidified carbon dioxide in ether. The mixture is a colorless semi-gelatinous body, having a temperature considerably below that of the solid gas itself (—79° Cent.) and for all practical uses is as effective as liquefied air without the dangerous and unstable properties of the latter. It is made by adding solid carbon dioxide to ether as long as it is dissolved, there being a slight effervescence at first, but this soon ceases and on continued addition of the solid gas a gelatinous mass results. The substance can be applied directly to the skin or superficial growths with an ordinary camels' hair pencil or a swab of cotton and the exact amount and nature of its action noted, an advantage over the use of solid carbon dioxide crayons as these both conceal the spot treated from the operator's view and their action cannot be so completely controlled and localized.

An Instrument for Shaking Down Thermometers

A handy instrument for shaking down a clinical thermometer is described in the Pharmazeutsche Zeitung (1912, p. 322). This



consists of a little clasp for catching the neck of the thermometer, the clasp being attached by means of a swivel to a handle, so that on being revolved the centrifugal action will throw down the mercury column. The handle also contains a little minute glass for timing the period of taking the temperature. It is made by Reinh. Kirchner & Co., of Ilmenau in Thüringen, Germany.

Rubber Statistics of the World.

The annual statistics issued in relation to the production, consumption, stock and prices of rubber have been published by the firm of Hecht, and are summarized by the Frankfurter Zeitung as follows:

According to the figures which relate to the year ended June 30, 1910, the harvest of Para qualities amounted to 39,190 tons, as compared with 38.075 tons in 1908-9, while the consumption was 39,363 tons and 38,249 tons in the two years, respectively. In 1908-9 the output was 1,395 tons greater than in the preceding year, and the consumption was 5,202 tons in excess of 1907-8, whereas the production and consumption in 1909-10 were only 1,115 tons and 1,114 tons, respectively, greater than in 1908-9. The visible stocks increased from 2,682 tons in 1908-9 to 4,217 tons last year, this seeming only to have been possible by a decrease in the invisible stocks. The total production of rubber throughout the world is returned by the statistics at 76,553 tons in 1909-10, as contrasted with 70,587 tons in the previous year, while the world's consumption amounted to 76,026 tons and 71,989 tons in the two years, respectively. These figures show an increase of 5,966 tons in the output and of only 4,037 tons in the consumption, whereas the augmentation in 1908-9 over 1907-8 was 4,208 tons in the production and no fewer than 9,613 tons in the quantity used. It is of particular interest to note that the deliveries in Europe in 1909-10 increased by 3,981 tons to 42,527 tons, but those in America only advanced by 56 tons. The arrivals in Europe are recorded at 44,336 tons in 1909-10, or 8,496 tons in excess of the preceding year, while the arrivals in America were 33,051 tons, and were less than in 1908-9. As a consequence, the European stocks rose by 2,163 tons to 5,107 tons in 1909-10, but decreased in the United States from 449 tons to 361.

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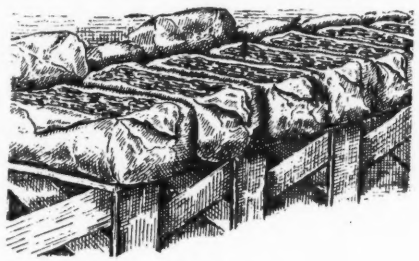
The London Drug Market.—III.

(By Our London Correspondent.)

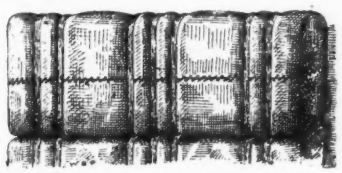
IT will be appropriate to give here brief descriptions of some of the principal drugs seen on the market, with an indication of their source of origin and the style in which they are packed.

Aloes.—The varieties most often seen in this market are the East Indian (known among buyers here as Zanzibar Socotrine and "Hepatic"), the West Indian (or Curaçoa) and the



IPECACUANHA.
Canvas covered bales or ceroons.

African (Cape, Natal, "Uganda" or "East African sun-dried"). The Socotrine variety is imported from Aden, Zanzibar or Bombay, and is usually packed in second-hand brandy cases, kegs and skins. Zanzibar or "Hepatic" comes to us in monkey skins and in kerosene tins. Curaçoa is produced mainly in the Dutch West Indian Islands, Aruba and Bonaire, very little coming actually from the sister island of Curaçoa. New York is, of course, the principal market for Curaçoa. Cape aloes is imported in wooden cases of from 3 cwt. to 5 cwt. in weight, London being practically the only market for this kind. Natal aloes is rarely seen nowadays, and the same applies to the so-called "Uganda" or "East African sun-dried." London is the market for the Zanzibar aloes, which has a peculiar sour flavor and is frequently imported in a semi-liquid condition.



DALMATIAN INSECT FLOWERS.
Principally imported from Trieste in pressed bales secured by iron straps and weighing from four to eight hundredweight.

Aniseed is obtained principally from Russia. It is marketed in September and the bulk of it is disposed of by the growers at the annual fairs of Krasnoje and Alexejewska, where the prices are fixed. The bulk of the Russian seed is exported to Germany, where it is distilled—oil of aniseed being an important article of commerce on the Continent. The finest aniseed, however, is grown in Spain and imported from Alicante. Other sources of supply are Italy, Chili, Greece and Austria. The Italian variety comes on the market in 125-pound bags or 250-pound bales, the Russian in bags of about 125 pounds each, and the Spanish in 1 to 2 cwt. bags or bales. Star anise is grown in China and is brought into commerce by way of Macao, Canton and Hong Kong. It appears in the London market in 68-pound and 133-pound cases.

Buchu is produced in the Cape Province, the whole consignment being usually shipped to London in 2½ to 3½ cwt. bales.

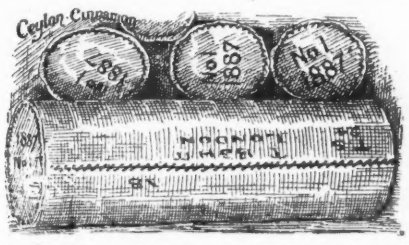
Cantharides come from Russia by way of Moscow and Hamburg. Hungary, Italy and Roumania also export small quantities. London is the principal market for the Chinese flies, gathered in the province of Sze-chuen, and shipped via Hong Kong.

Cardamoms, as sold on the London market, are grown wild, and also cultivated on the Malabar coast of India and in Ceylon. India is a large consumer, as the natives are very fond of the spice, but considerable quantities are disposed of annually in London for American, British and Continental consumption. The Ceylon cardamoms are considered the best, and the cultivation of the cardamom in that island has been raised to a fine (and profitable) art. The finest qualities are known as "Ceylon-Mysores," then come "Ceylon-Malabars," "Wild Ceylon" and "Aleppy," types of which are shown in the illustration herewith.

Europe prefers the bleached varieties, but Asia likes her cardamoms green. The bleaching is accomplished by placing the fruit in trays over burning sulphur. Besides their use in galenical preparations, cardamoms have a far greater field of usefulness in Russia, Sweden, Norway and Germany as a spice for culinary purposes, while France and Italy use them largely in the manufacture of liqueurs. Indian cardamoms are usually imported in large cases holding 1½ to 2 cwt., while those from Ceylon are shipped in boxes varying from 40 pounds to 100 pounds in weight. The price paid for extra bold good pale Ceylon-Mysores at the last auction was $1 to $1.80 per pound, but a consignment of Indian cardamoms (from Tuticorin) realized slightly higher prices. Decorticated cardamom seeds are also a regular article on this market.

Castor Oil is chiefly imported from Calcutta, most of the castor oil of commerce being produced from seeds grown in British India. The Indian oil is chiefly used for lubricating and other industrial purposes. The finest British oil is produced at Hull, but a considerable quantity of the medicinal oil in use comes from Italy and France, the Italian being looked upon as the best. The packings for Italian oil are cases of four 40-pound tins; French, 3 to 4 cwt. barrels; Calcutta, cases of two or four 40-pound tins; Bombay, Madras and Canada, 2 to 4 cwt. barrels.

Castoreum.—Although very sparingly used in medicine nowadays especially in this country, there is considerable Continental demand for castoreum, its principal use being for the manufacture of perfumery. The bulk of the supply comes from Canada, but some quantity is sent from Russia, the beavers of Siberia being the contributory agents. The Hudson Bay Company practically controls the import trade, and a sale is held once a year in London under the auspices of that company. This annual auction usually takes place in December, the last being on December 13, 1911, when 1,554 pounds of the drug were offered, the whole being practically disposed of. These sales are always well attended by buyers representing British, American, German, French and Austrian consumers, and, owing to the restricted quantity, competition is generally keen. In 1911, the prices paid were on an average 5 percent. to 10 percent. higher than in the previous year. The drug is graded into "firsts" (realizing from about $44 to $47 a pound); "firsts and seconds" ($40 to $49 a pound);



ORIGINAL PACKAGES OF CEYLON CINNAMON.
(By courtesy of the London Chemist and Druggist.)

"seconds" ($40 to $4 a pound); "thirds" ($30 to $48 a pound); "pickings" ($40 to $48 a pound), and "cuttings" ($11 to $19 a pound). It will be observed from these figures that the best qualities do not always realize the highest prices. "Firsts and seconds" in some cases bring more than "firsts," while "thirds" sometimes make more money than "seconds." It is all a question of demand and skilful auctioning. Usually a quantity of

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Oregon castoreum, shipped via Quebec, New York, Montreal, etc., is offered by one of the drug brokers in his sale rooms at the same time. In December last the quantity of this offered was only 598 pounds, or something like 360 pounds less than in 1910.

Chamomiles are either English or Belgian. The former are the more valuable and are grown in the Mitcham district in Surrey. The English crop is so restricted that Belgium supplies the principal portion of this market's requirements. The Belgian chamomiles are imported generally in 1 cwt. bales. Germany and France also cultivate a fair quantity of the flowers, but they are of no moment on this market.

Cinnamon has been cultivated in Ceylon since the early part of the sixteenth century. At that time it was the principal produce of the island until it was ousted by coffee and tea. The best cinnamon still comes from there in canvas-covered bales about 4 feet high, weighing about 90 to 110 pounds. The packing is very carefully done, thin quills being placed one inside the other until they form a long reed or stick. These sticks are then packed together in a roll or bale, and on arrival at the London docks they are sorted, repacked and classified in four different grades, according to the thickness—the thinnest being the best. London is the central market for the spice, special public auctions being held every three months.

Cochineal has been cultivated in the Canary Islands for over sixty years. It was brought over from Mexico by the Spaniards; until then all our supplies came from America. About one-half of the cochineal exported from the Canaries is sent to England, but exports still come from Mexico and Central America, and also from Java. The Canary cochineal includes three kinds—silver (in 200-pound bags), black and gray (in bags of from 140 pounds to 160 pounds). There are also three kinds of Honduras cochineal—black, gray and reddish, and this applies also to the Vera Cruz variety. Java cochineal is in reddish grains and is packed in tin boxes holding from 40 to 60 kilos each.

The Codliver Oil of principal importance on this market is the Norwegian, but small quantities of Newfoundland are occasionally seen. The medicinal oil is packed in tin-lined barrels holding about 26 gallons each, and comes from Bergen, Aalesund and Tromsoe.

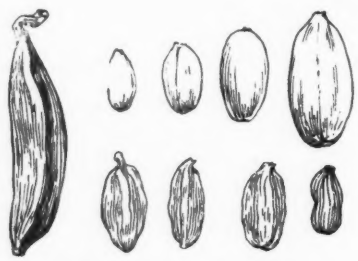
Dragon's Blood is shipped from Singapore, London being the central market. The arrivals are picked over by hand, and sorted (as seen in the illustration on page 189 of the AMERICAN DRUGGIST for May). It is principally used in varnish making and in the coloring of wood to imitate mahogany. It occurs in irregular lumps, in bag-shaped lumps, in balls, in slabs, in cakes (technically known as "saucers") and in sticks ("reed"). Sometimes it is imported in sticks of from 9 to 12 inches long, wrapped in a palm leaf and tied at the end. Another variety known as "Zanzibar drop," imported from Bombay, is in hard, irregular-sized tears.

Ergot of Rye in its finest form is produced in the Northwest provinces of Spain. It is shipped to London from Vigo or Lisbon, and the bulk of it is consumed in the United States. Russian ergot, although of equal medicinal value, does not command such a high price, mainly because it is not so carefully packed and good looking. Occasional parcels of German, French, Belgian and Italian ergot are seen on the market, especially when the Spanish or Russian crop has failed.

Gamboge comes from Cambodia and the Eastern provinces of Siam. It is usually imported in cases (see illustration on page 139 of the AMERICAN DRUGGIST for May), with an inner covering of coarse calico, the weight generally being about a picul (133⅓ pounds), sometimes only half that quantity, and often about 250 pounds. It is most frequently in rolls of various lengths, sometimes solid, but oftener hollow. Occasionally it is received in shapeless blocks or lumps, with marks showing they have been packed in palm leaves. This gum was at one time (and still is, though not so much so now) liable to adulteration. At the Crutched Friars' warehouses there is a "museum," in which specimens of gamboge are shown containing solid lumps of lead, etc., deftly concealed in the center.

Gum Arabic comes to us—at least the most esteemed variety—from France. It is collected in the French Senegal district, and its commercial headquarters for Europe is Bordeaux. Odd packages still come sometimes from Kordofan, as received at Cairo and Alexandria from traders who bring it down the Nile, or it may arrive via Trieste, the great sorting market. A pale variety is imported from Mequinez, Mogador and other Moroccan ports. The Kordofan gum is marketed in large bales or serons weighing from 300 to 500 pounds. The Mogador gums—"White Mogador," "White Barbary" and "Brown Barbary"—are brought over in 1½ cwt. casks. Two kinds come from South Africa; these are the "hard brown Cape" and the "soft white Cape," gathered in the Cape province. London is the principal market for East Indian gums, these coming over in cases, bags or bales, varying in weight from 2 cwt. to 6 cwt.

Gum Benzoin (or "Gum Benjamin," as it is called in Mincing Lane) is classed under four varieties—Siam, Sumatra, Penang and Palembang. The Siam is the most valuable. It is usually imported in cases into which the gum has been poured while in a semi-fluid state, or it may be packed after it has been dried. Each case weighs from 1 cwt. to 2 cwt. It is collected in that district of Siam which borders on Tonquin, and is exported from Bangkok. Sumatra benzoin occurs always in solid blocks, wrapped in gunny to prevent the gum from sticking to



DIFFERENT KINDS OF CARDAMOMS
(Courtesy of the London Chemist and Druggist.)

the wood. This kind is almost always "false packed"—the sides and corners being packed with earth. When shown, therefore (see illustration on page 9 of the AMERICAN DRUGGIST for May), one case in every consignment is cut transversely to detect adulteration. A case of Sumatra benzoin may weigh anything from one-half cwt. to 2 cwt. It is produced in Java and Sumatra, coming to London via Singapore or Penang, or to Amsterdam via Batavia. Penang benzoin is not often seen on this market, but the Palembang variety is a regular article of import. The Palembang gum, being free from cinnamic acid, is very suitable for producing benzoic acid, but it is unsuitable for tincture making.

Honey is classed as a "drug," at least it is a regular item at the drug sales. The most important producer for this market is probably California. Most of the Californian honey is brought from San Francisco by sailing vessels round Cape Horn, but part goes by rail and reaches here by way of New York. Chili, Jamaica and Australasia also send us large consignments of honey, Liverpool being the principal market for the Chilian variety. Much of the Chilian yield is exported also to Hamburg and Havre. Cuba also exports honey to us, but more to France and Germany. The shipments from Australia and New Zealand are on the increase. The modes of packing are: Californian, cases of two 56-pound tins or 120-pound cases; New Zealand, 100-pound kegs or cases of twenty or twenty-four 5-pound tins; Ja-

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maica, 2¼ to 3½ cwt. barrels or casks; Cuban, 40 to 60 gallon barrels or "tierces."

Insect Flowers are nearly all obtained from Dalmatia and Herzegovinia, Trieste being the port of shipment. They are imported, as a rule, in pressed bales secured by iron straps, and weighing from 2 to 8 cwt. The best variety is the wild Montenegrian, or Crivoscian, but the supply is limited. America is the principal buyer. Persian flowers are sometimes seen on this market still.

Ipecacuanha is one of the Mincing Lane "specials." Its value has increased considerably within recent years, and the market is always keenly watched. The best root now comes from Johore, Straits Settlements, where it is cultivated, and it varies so little in quality that a parcel of "Johore" is usually bought without analysis of its emetine content. The next in order of appreciation is the "Minas" or "Rio" variety from Brazil. Then comes the Cartagena (Colombian) root well known on the New York market. The Johore root is imported direct to London, and the bulk of the consignments of Brazilian root also comes here direct from Montevideo, Buenos Aires or Rio de Janeiro, and the Colombian variety sometimes comes direct via Panama. The mode of packing (stout canvas bales with an under covering of rough calico) is shown in the illustration on page 43.

Oil of Peppermint is mainly American and Japanese, although the finest of all is the English oil. The production of English peppermint oil is very small, however, in comparison with the total. The peppermint herb is grown in the districts of Mitcham (Surrey), Market Deeping (Lincolnshire), Cambridge and Hitchin (Herts). The American brands ("H. G. H.," "Wayne County," "Todd's Crystal White," etc.) have a well recognized value on the regular market, but the Japanese brands are now an important factor. Of the latter the "Kobayashi" and the "Suzuki" brands are the best known. The English oil is marketed in 5-pound bottles; "H. G. H." in cases of eighteen bottles per case, 23⅝ pounds; other American brands in cases of two 20-pound tins or six 4½-pound bottles; the Japanese in cases of sixteen tins (4 pounds to 7 pounds each) or ten tins of 5 pounds each.

Otto of Rose is imported from Bulgaria in flattened round tin drums, like canteens, covered with thick white woolen cloth and a calico label inscribed with Bulgarian characters.

Orris is grown principally in the district east of Florence in Central Italy, and is shipped via Leghorn. The Florentine is considered the best root, the less valuable Verona root being grown in the northeast of Italy. France buys about half of the total crop, Great Britain, the United States and Germany taking the remainder. It is imported in bags or casks holding about 1½ cwt. each.

Opium comes to us from Asia Minor, the Salonica district of European Turkey and Persia. Smyrna is the chief opium center for Asia Minor, and the best Persian opium is grown in the neighborhood of Ispahan. The bulk of this is consumed in China. Persian opium is sent to market in cakes weighing from three-quarters of a pound to 1½ pounds, wrapped in vine leaves, fig leaves or poppy stalks. From 100 to 200 cakes are packed in a case. Turkey opium comes in cases weighing about 140 pounds.

Sarsaparilla arrives here in seven different varieties—gray Jamaica, native Jamaica, "Lima" or "Lima-Jamaica," Honduras, Mexican, Guayaquil and Guatemala. The most esteemed by wholesale druggists here is the so-called gray Jamaica, collected in Costa Rica and shipped direct to London. The "native" Jamaica is imported fro mthat island. The Honduras variety (principally used in the United States) is by far the best looking. It is neatly packed in bundles of eighty, which compose a ceroon. The ceroons are covered at top and bottom with a piece of cowhide and fastened together with cowhide thongs. Guayaquil arrives in large rough bundles or "hanks" of 3 to 4 pounds, and, being of coarse texture, is less valuable than Honduras. Mexican is the lowest quality of all.

Senna seems to be popular in America judging by the keen demand there is for American consumption at the periodical auctions. The bulk of the supply comes to London via Bombay from the port of Tuticorin in the Tinnevelly district of Madras. The less-used Alexandrian senna grows in the Sudan and Kordofan, and is shipped here from Alexandria, where it is conveyed by caravan. Trieste is the principal center for Alexandrian senna, for which there is only a small demand in England. The great bulk of the crop is sent direct to the United States.

The Care of Plate Glass Showcases

Much trouble and loss are caused by improperly setting up and handling plate glass showcases, it being forgotten that these are made of a brittle substance and that they cannot be shoved around and used as roughly as metal or wood cases. Showcases are found with cracks in the top or sides and there is much seeming mystery in the sudden development of a crack along the front or ends, but there is a reason for all things and a little observation will show the cause. The two principal causes of cracking are improper setting up and improper construction, a third cause also might be added—too great loading of cases with heavy goods. Plate glass cases must be set up perfectly level so that no undue strains be caused. If the floor is not level a level foundation should be built up for the case, using thin strips of hardwood, or in extreme cases laying a level floor over the old one under the case. The glass plates must be properly supported and the supports spaced according to the size of the case, as a large plate of glass requires supports closer together than a small plate. The second cause of cracking, faulty construction, usually comes from fastening the plates together by metal bolts passing through holes drilled in the glass and screwing up the nuts at the ends too tightly, not leaving any space for expansion and contraction of the glass. If a glass showcase with the sides and ends held together in this manner is placed too near a radiator or source of heat or is exposed to the sun's direct rays the unequal expansion of the glass is almost certain to cause cracks to appear in some place. Corner clamps should always be used, and these should provide for expansion and contraction.

If a crack should appear in a plate of glass it may often be prevented from increasing in size by cutting a short scratch with a diamond at right angles to the first crack at the end furthest away from the edge of the glass. This checks the spread of the crack by relieving the internal strain of the glass. Another method sometimes effective is to fill up the crack at once with a transparent elastic cement, ordinary glue must never be used, as this is likely to increase the strain in the glass by its contraction. Some glues adhere so closely to glass, that the glass itself will chip off in little flakes before the adherence of the dry glue is broken. Plate glass tops and shelves should be evenly loaded, that is, should not be made to carry a heavy load at one end and a light load at the other. The heavy loads must never be placed in the middle part of the plate, even if this has a supporting brace under it.

Plate glass should always be handled carefully when moving it and rested on one edge, never laid down flat unless on a perfectly level surface. The edges should rest on a cushion of some sort, a piece of carpet or folded newspapers, especially if placed on a stone or cement floor, as the glass is easily chipped by the hard surface and it is further exposed to cracking because of the variations in its temperature, due to the cold stone. Plate glass must be cleaned carefully or it will soon lose its luster and become dull and show scratches. The best cleanser for plate glass is a mixture of equal parts of alcohol, water of ammonia and whiting, an ounce of each, diluted to one pint with soft water. This removes all grease and dirt and keeps the surface of the glass highly polished and will not scratch it. The mixture should be applied liberally and the cleaning done with soft cloths, giving the final polish with a silk cloth or a soft chamois skin. Never clean plate glass with newspapers or wrapping paper.

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Some Seasonable Formulas

Working Formulas Collected from the Note Books of Successful Druggists for Preparations in Profitable Demand During the Summer Season

Witch Hazel Toilet Cream

Quince seed	1 lb.
Boiling water, sufficient to make	1 gal.
Extract of witch hazel, distilled	8 pt.

Infuse the quince seed in the boiling water until the mucilaginous portion is dissolved, then strain through filtering cloth until clear. Now add, in small quantities at a time and with frequent shaking, eight pints of distilled extract of witch hazel. Dissolve in this:

Borax	4 oz.
Glycerin	4 lb.

Using heat if necessary. Perfume the mixture with the following:

Oil neroli	15 min.
Oil rose geranium	40 min.
Oil bergamot	20 min.
Menthol	20 gr.
Extract white rose	4 oz.
Alcohol, to make	4 pt.

Add the perfume to the former ingredients with constant shaking, strain until perfectly clear. Put up in four ounce bottles to sell at twenty-five cents.

Cucumber Toilet Cream

Oil of sweet almonds	2 lb.
White wax	3 oz.
Spermaceti	2¼ oz.
Cucumber extract	5½ oz.
Cucumber juice	2 pt.

Melt the oil, wax and spermaceti together at a low temperature, add the extract of cucumber and finally the cucumber juice, using the same manipulations as in making cold cream. A smoother cream may be obtained by the addition of about ten grains of borax, dissolved in the cucumber juice. Cucumber extract and juice are made as follows:

CUCUMBER EXTRACT.

Cucumbers, fresh	1 lb.
Alcohol, 95 percent.	20 oz.

Cut the cucumbers into thin slices and macerate in the alcohol, warming the mixture slightly, for three or four days. If the color and odor of the cucumbers are not sufficiently strong, add a few more slices and macerate longer.

CUCUMBER JUICE.

Take a sufficient quantity of fresh green cucumbers, wash thoroughly, then slice, skin and all, into small pieces, place in an earthenware or porcelain lined vessel and pour on enough water to cover well. Let simmer, *not* boil, for about an hour, adding water as that in the vessel evaporates, then strain through muslin or fine cheesecloth; let stand until cold and then add four ounces of alcohol to each pint of clear cucumber juice and filter until clear. Two grains of salicylic acid to the pint of juice may be added to prevent its fermenting.

Deodorant Toilet Powders

These are in great demand during hot weather for preventing the disagreeable odor of perspiration and imparting a feeling of coolness to the skin. They can be sold in sifting top cans easily for twenty-five cents and are excellent repeaters when once tried.

OXYGEN TOILET POWDER.

Talcum, finest powder	94 parts
Sodium perborate	5 parts
Violet essence, synthetic	1 part

Reduce the sodium perborate to an impalpable powder, then mix with the talcum by repeated sifting through a very fine sieve, finally adding the perfume and thoroughly distributing it through the powder.

FORMALDEHYDE TOILET POWDER.

Talcum, finest powder	94 parts
Paraformaldehyde	5 parts
Violet essence, synthetic	1 part

Reduce the paraformaldehyde (which is a solid isomeric form of formaldehyde) to an impalpable powder, mix with the talcum by thorough sifting through a very fine sieve and incorporate the violet perfume. This makes a very effective deodorant for use around the armpits and other parts of the body subject to excessive perspiration. Formaldehyde is slowly liberated from the powder and so gradually as not to be irritating to the skin. This is not well adapted for a face powder.

FORMALDEHYDE DEODORANT LOTION.

Formaldehyde solution, 40 percent.	2 parts
Alcohol	20 parts
Oil of lavender flowers	1 part
Water, sufficient to make	100 parts

Dissolve the oil of lavender in the alcohol, the formaldehyde in the water, mix the two solutions. Let stand a few hours and filter till clear. This is used locally in as liberal quantity as may be desired.

Mosquito Preventatives

Mosquito lotions, so called, are in great demand during summer months, especially at the seashore and country resorts and may be divided into two classes; one which repels the insect pests, another which gives relief from the pain and irritation from their bites. Two formulas are given for the first class and one for the second.

ANTI-MOSQUITO LOTION.

Menthol	1 oz.
Oil of citronella	1 oz.
Ammonia water, strong	4 oz.
Water	8 oz.
Alcohol, sufficient to make	5 pt.

Dissolve the menthol and oil of citronella in the alcohol, dilute the strong ammonia water with the water and mix this gradually with the alcoholic solution, shaking well after each addition. Let stand a few hours and filter until clear. This lotion is both a preventative of annoyance by mosquitoes and also relieves the pain, etc., of their bites if applied locally to the inflamed places.

MOSQUITO PREVENTATIVE.

Naphthalin, flake	1 oz.
Oil of lavender flowers	½ oz.
Alcohol, 95 percent.	3 pt.
Water	1 pt.

Dissolve the naphthalin and oil of lavender flowers in the alcohol, add the water in small portions, shaking well after each addition, let stand a few hours and filter clear. If the naphthalin should not be entirely soluble in this mixture of alcohol and water, increase the proportion of alcohol in the mixture. This lotion may be applied directly to exposed parts of the body, as the face, neck and arms, or, if too irritating because of its alcoholic strength may be diluted with a little water before application. If used liberally it is reported to be a sure protection against mosquitoes as the odor of naphthalin seems to be very offensive to them. Other perfumes may be used.

MOSQUITO LOTION.

Sodium perborate	5 parts
Glycerin	10 parts
Violet toilet water	80 parts

Triturate the sodium perborate with the glycerin and dissolve the mass in the violet toilet water, using any good violet water not too strong in alcoholic proportion, and filter if necessary. Application of this lotion to the bitten places by means of a bit of cotton or soft cloth will relieve the pain and inflammation almost instantly and it also neutralizes the poison injected by the mosquito when biting.

Dusting Powder for Tired Feet

People walk a great deal more in summer, especially when on a vacation, than usual, and tired, sore feet are a common complaint. The following formula is for a powder to be dusted on the feet both before starting on a walk and to relieve the tired feeling when back at home and is especially good for relieving excessive perspiration and preventing offensive odors from the feet.

FOOT POWDER FOR TIRED FEET.

Formalin, 40 percent. solution	2 parts
Thymol	1 part
Oxide of zinc	35 parts
Starch, powdered	15 parts
Talcum, powdered	50 parts

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Reduce the thymol to a fine powder and incorporate with the starch and oxide of zinc; incorporate the formalin with the talcum, mix the two powders and mix thoroughly by sifting through a fine sieve.

Removing Fruit Stains

Fruit stains and white dresses are a summer combination that offers a chance for profit making as most fruit stains can be speedily removed by treatment with a solution of chlorinated soda, Javelle water. This may be made as follows:

JAVELLE WATER FOR REMOVING FRUIT STAINS.

Chlorinated lime, fresh	1 lb.
Bicarbonate of soda	4 lb.

Dissolve the bicarbonate of soda in one gallon of warm water, make a paste of the chlorinated lime by aid of a little water and then stir this into the solution of bicarbonate of soda. Cover and let stand for two or three hours, stirring the mixture frequently. Allow the precipitate formed to settle and decant the clear liquid, bottle at once in amber glass bottles and cork tightly. This solution is quite strong and cannot be used on fabrics dyed with delicate colors as it will fade or decolorize them. If the stains are old it may require a few hours' soaking in the Javelle water and application of a strong solution of tartaric acid to remove them. Thorough rinsing with water should always follow use of these solutions.

To Remove Grass Stains

Grass stains are also a summertime annoyance. As the green color is chiefly chlorophyl and as this is decolorized by acids the best treatment for grass stains on white garments is a liberal application of a solution of tartaric acid, followed by rinsing in water. A good formula for a grass stain remover is the following:

GRASS STAIN REMOVER.

Tartaric acid	10 parts
Alcohol	20 parts
Water, sufficient to make	100 parts

The alcohol is added to prevent formation of fungi or mould in the solution. The directions for use of this solution should read about as follows: "Rinse the stains in clear water until dirt, starch, etc., are removed from the fabric, then soak the stains in the solution until the green color disappears, then rinse in water. Never use soap to remove grass stains as this makes the stain permanent."

Remedies for Summer Ills

Summer, with its bounteous supply of fresh fruits and vegetables, tempts most people to overindulgence in these luxuries, hence the druggist is frequently called upon to supply some simple remedy to counteract the effects of too much fruit or the eating of unripe or over ripe fruit and vegetables. One of the best and safest remedies for the diarrhœa caused by over indulgence in fruit or green vegetables is the prompt administration of castor oil, but as this is repugnant to most persons, especially in hot weather, it should be so prepared as to be least offensive to sight and taste. Every druggist is familiar with the method of giving a dose of castor oil in soda water, but often the soda fountain is not nearby, so a preparation of castor oil that is agreeable to the palate will have a ready sale, especially to families with children. Another good and effective remedy for bowel trouble in summer is King's Rhubarb Cordial, which does not contain opium in any form. Formulas for both preparations are here given:

TASTELESS CASTOR OIL.

Saccharin	2 gr.
Vanillin	2 gr.
Oil of coriander	5 min.
Alcohol, 95 percent.	½ oz.
Castor oil	8 oz.
Olive oil	2 oz.

Dissolve the saccharin, vanillin and oil of coriander in the alcohol, mix the castor and olive oils together and add the flavoring solution. This should make a clear mixture, the dose of which is the same as castor oil. A "prepared castor oil" that has proven very popular may be put up according to the formula given below and sold in two ounce bottles for twenty-five cents:

PREPARED CASTOR OIL.

Castor oil	12 oz.
Fluidextract of licorice	1 oz.
Oil of coriander	5 min.
Oil of aniseseed	5 min.
Oil of cinnamon	5 min.
Oil of lemon	10 min.
Glycerin, sufficient to make	16 oz.

Dissolve the essential oils in about two drachms of alcohol, add to the fluidextract of licorice, mix thoroughly and add the glycerin with constant trituration. Now add the castor oil and manipulate the mixture just as if making an emulsion, which the preparation really is. If carefully prepared, the mixture flows readily and the taste and odor of castor oil is completely disguised. This preparation may be made up and kept on hand for dispensing at the soda counter when "a dose of prepared castor oil" is called for. It should be unnecessary to add that the dispensing of such remedies as castor oil should be conducted at a distance from the soda fountain, as the administration of castor oil to a stranger does not lend appetite to the partaker of a fruit sundae or soda at the same counter. Separate glasses should be kept and used for medicines dispensed at the soda counter and their administration should be made as quietly and privately as possible.

KING'S RHUBARB CORDIAL.

Rhubarb, best, in coarse powder	2 oz.
Potassium carbonate	2 oz.
Golden seal, coarse powder	1 oz.
Cinnamon, coarse powder	1 oz.
Sugar	4 lb.
Oil of peppermint	20 min.
Brandy	1 gal.

Macerate the rhubarb, golden seal and cinnamon in half gallon of the brandy at a gentle heat for six hours, transfer to a percolator and exhaust the drugs by percolation, adding the other half gallon of brandy as menstruum and displacing any remaining in the marc by water until a gallon of percolate is obtained. In this dissolve the potassium carbonate and the oil of peppermint and sugar, let stand and filter or strain until clear. This is the original formula of Doctor King given in King's American Dispensatory, edition for 1900. A similar preparation which requires less time and labor may be made from the formula given in the National Dispensatory for Syrupus Rhei et Potassii Compositus, in which fluidextracts are used instead of the drugs themselves. While more troublesome and expensive to make the original formula is much more palatable and efficient and keeps better. As it has a distinctive flavor it can be sold under the druggist's own label as something different and better than the ordinary remedies exploited for summer complaints, bowel disorders, etc. An improvement on this formula would be the use of equal parts of oils of coriander and caraway seed in place of the oil of peppermint.

A toilet water is a necessity for the summer vacation for many women, especially those inclined to embonpoint and those who perspire freely, who wish to appear fresh and dainty no matter how hot the day. A good lavender water has the merit of being agreeable in odor to most persons as suggesting the clean and fragrant perfume of old fashioned gardens and is not heavy and cloying like many of the modern scents. Lavender water is also an excellent remedy for headache due to fatigue or nervous exhaustion both from its soothing odor and its cooling effect. An excellent formula for lavender water is this:

LAVENDER TOILET WATER.

Oil of lavender flowers	10 fl. dr.
Oil of bergamot	1½ fl. dr.
Oil of neroli	5 min.
Oil of sandalwood	7 min.
Oil of rose geranium	6 min.
Alcohol, 95 percent.	30 fl. oz.
Rose water	10 fl. oz.
Water, sufficient to make	60 fl. oz.

Dissolve the essential oils in the alcohol, add the rose water and let stand a few hours. Add the water, warmed to about 100° Fahr., in small portions, shaking well after each addition, let the mixture stand for several days and then filter clear, using paper pulp or talcum if necessary. The resulting toilet water will have a deeper color if magnesium carbonate is used for filtration. The cost of this toilet water, like others, may be cheapened by decreasing the proportion of alcohol used, but the product is not as fragrant and lasting as the original.

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Notes, Queries & Answers

Two Troublesome Suppository Masses.—W. F. G., Florida, has had considerable trouble with two prescriptions for suppositories and submits them for information as to the best method of procedure. In both prescriptions the final result was a mottled mass full of gummy lumps and the medicament always settled at the bottom of the suppositories. The two prescriptions are as follows:

SUPPOSITORIES NO. I.

℞ Acid. tannic .....gr. xiii
Ext. belladonn. .....gr. ii
Opii pulv. .....gr. iii
Ol. theobrom., q. s. ft. suppos. No. XII.

In making these suppositories W. F. G. thinned the extract of belladonna with water and then added the powdered opium and tannic acid, using enough water to make a thin paste and incorporated this with the melted cacao butter and poured the mixture into chilled moulds. The trouble was caused by the formation of tannates of the alkaloids of belladonna and opium when the tannic acid was added to these in the presence of water and these tannates are tough, gummy substances which are very difficult to distribute even in a pill mass and which would be entirely incompatible with an oily base such as cacao butter. The proper method of making such suppositories containing tannic acid and vegetable extracts containing alkaloids is as follows:

Triturate the opium and tannic acid in a dry mortar to an impalpable powder, then make into a thin paste with a few drops of castor oil; thin the extract of belladonna with a few drops of water and incorporate with the other ingredients, then work up this portion with a little cacao butter. Have the mortar warm enough to just melt the rest of the cacao butter; when melted add the pasty mass containing the medicinal ingredients, triturate briskly until an even mixture results and pour into moulds chilled by standing on ice. When tannic acid is prescribed in connection with alkaloidal drugs for suppositories water should be used with such mixtures as sparingly as possible; alcohol may be used for the extracts and formation of tannates prevented by trituration of tannic acid with a little castor oil.

The second prescription is slightly different, but in a somewhat similar class. It is:

SUPPOSITORIES NO. II.

℞ Acid. gallic .....gr. iii
Ext. belladon. .....gr. ¼
Ext. hamamel. .....gr. iss
Ol. theobrom., q. s. ft. suppos. No. I.

This suppository should be made as follows: Rub the gallic acid and extract of hamamelis together with a few drops of castor oil until quite smooth and free from crystals of gallic acid; thin the extract of belladonna with a few drops of alcohol and add to the other two ingredients, triturating until most of the alcohol has been evaporated. Now incorporate this paste with the cacao butter in a warm mortar, adding the cacao butter in portions so that a smooth uniform mixture will result, then pour quickly into moulds chilled by standing on ice. The least possible heat should be employed in making both suppositories as heat will cause the mixture of tannic or gallic acid and alkaloidal drugs to form a still more difficultly distributed gummy mass.

It is well to remember that castor oil is one of the best excipients for powdered drugs to be incorporated into suppositories, as it prevents to considerable extent chemical reactions between drugs such as mentioned here and insures suspension of heavy particles in the cacao butter during its solidification.

In either of the above cases even better results can be obtained by triturating the ingredients as indicated, mixing and forming the suppositories in the cold either by hand or with the aid of a suppository machine.

Suppository Mass for Hot Climates.—J. C. B., Los Angeles, Cal., has had considerable trouble because of the return of suppositories by customers who complain that they melt and become a sticky mass after a few days and asks how he can prepare suppositories that will not soften or melt in his locality where warm weather exists practically the year round. The problem may seem simple at first, the addition of wax raising the melting point of cacao butter in proportion to the amount used, but such suppositories while keeping perfectly might have too high a melting point to be suitable for rectal medication. The best solution of the problem is the employment of a suppository basis that will resist summer temperatures and which will yet melt at the temperature of the rectum, ordinarily about 100° F., and to use this in place of cacao butter. A formula for a suppository basis that has been used with excellent results in the Philippine Islands by government pharmacists is suggested as suitable for the conditions mentioned. The proportions of the ingredients may be varied to meet different climatic conditions.

SUPPOSITORY BASE.

White wax .....10 parts
Castor oil ..... 5 parts
Lanolin, anhydrous ..... 5 parts
Cacao butter .....80 parts

Melt the wax, lanolin and castor oil together at a low temperature, add the cacao butter and stir constantly until a uniform fluid mixture results. Let cool and when of syrupy consistency pour into chilled moulds dusted with a little powdered starch, remove, wrap in oiled paper and keep in a cool place. When suppositories are to be made use this base instead of cacao butter, using powdered starch as a dusting powder to prevent adherence of suppositories. Powdered starch is a much better protective material than lycopodium as it will not cause irritation of inflamed surfaces which often occurs when the latter is used too liberally.

Standardization of Ergot.—"Pharmacist," New York, wishes to know if there are any reliable methods of assay, either chemical or physiological (biological) for ergot preparations, especially the fluidextract. In answer to this we quote the summary in Bulletin No. 76 of the Hygienic Laboratory of the Public Health and Marine Hospital Service of the United States on the Physiological Standardization of Ergot. The following are the conclusions reached by Dr. Charles W. Edmunds, professor of materia medica and therapeutics at the University of Michigan, and Dr. Worth Hale, assistant pharmacologist in the Hygienic Laboratory:

(1) Chemical methods for the assay of ergot show little relation to biological methods, and the latter should be used as a means of insuring those who require this drug as a remedy both potent and of uniform strength.

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(2) For this purpose, the method using the cock's comb is recommended on practical grounds rather than that using the uterus.

(3) Ergot preparations should be marked with the date of manufacture.

(4) The fluidextracts of ergot examined varied in strength greatly, some being only about one-fourth as strong as a preparation freshly made from Spanish ergot. Nonpharmacopœial preparations showed even greater discrepancies between the strengths claimed and those actually found.

(5) Until more reliable methods of manufacture are found makers of ergot preparations would be wise to exclude the phrase "ergot in permanent solution" from their advertising literature. They may thus avoid misbranding.

We would advise the pharmacists who are interested in this subject to apply to the surgeon general of the Public Health and Marine Hospital Service, Washington, D. C., for a copy of this Bulletin, and carefully study its contents. Although biological standardization is still in its infancy, it is gradually growing and is getting perfected and will in due time be admitted into the Pharmacopœias. Very likely the U. S. P. will be the first one to officially adopt the physiological standardization of some drugs.

Normal Saline Solution.—H. J. G., Jersey City, requests the correct formula for normal saline solution, referring to a solution containing sodium chloride. Normal saline solution, so called, is a solution of sodium chloride in distilled water of the same density and osmotic pressure as the normal body fluid or serum and is frequently used to replace by intravenous injection the lost fluids of the body in cases of hemorrhage, dysentery, etc. It is made by dissolving six grams of pure sodium chloride in 1,000 cubic centimeters of distilled water, making a 0.6 percent. solution, and then sterilizing the solution by heating it to boiling point. Of course all utensils used in making and using such a solution must be previously sterilized by heating or boiling them in water as an infected solution would cause grave trouble when used, as is usually the case, in serious illness, and it must be kept in sterilized bottles or flasks. Normal saline solution is sometimes erroneously called physiological salt solution, but this is not correct. A solution containing varying proportions of both sodium and potassium chloride, sulphate and phosphate is sometimes required under this name and tablets representing one formula are sold by manufacturing pharmacists, one tablet dissolved in a liter of water making the solution. These are seldom used, however, by surgeons and when normal saline solution is called for the one described above should be dispensed. Normal saline solution must not be confused with normal solution of sodium chloride which contains 58.5 grams of sodium chloride in 1,000 cubic centimeters of water. This solution is only used in volumetric analysis and like all normal volumetric solutions contains the equivalent of one replaceable hydrogen atom, expressed in molecular weight, of the substance in one liter of water.

Cuticura Ointment.—C. C. C., Cleveland, Ohio, requests a formula for an ointment similar to Cuticura ointment, which we are sorry to be unable to give, as this is a proprietary remedy and its composition is known only to its manufacturers. In a report of an analysis made by an English chemist it is stated that Cuticura ointment was practically composed of a soft petrolatum base with the addition of one percent. of phenol and a smaller proportion of eucalyptol, the whole colored green with a vegetable coloring matter. We have no information as to the correctness of this report, but give it as the only available information on the subject. An ointment of this character might be made by infusing the fresh green leaves of stramonium or belladonna in melted petrolatum to obtain the desired green color (and possibly some therapeutic value from the fresh drug itself) and then incorporating in this one percent. each of crystallized phenol and eucalyptol. Other green drugs might be used if preferable, hyoscyamus, for instance, yielding a bright green color on infusion with melted petrolatum or vegetable oils and the product possessing considerable value as a mild sedative for skin affections.

Deodorant Powders for Excessive Perspiration.—T. W. S., Aurora, Ill., requests information as to the composition of several widely advertised proprietary preparations for overcoming excessive perspiration, or, lacking this, formulas for effective deodorizing powders for this purpose. We are unable to give the composition of the proprietary powders mentioned as this is a trade secret of the manufacturers, but our correspondent is probably correct in his surmise that magnesium carbonate forms the chief basis, aluminum or zinc sulphate being also present. To make an effective preparation for overcoming the discomfort of excessive perspiration, especially that under the arms, the composition of perspiration must first be borne in mind. This is a watery fluid containing small quantities of the fatty acids and esters of the body, butyric, capric and capryloic acids and esters predominating, and that it is the oxidization of these that causes the offensive odors of perspiration. Therefore a powder that will be effective in overcoming the odor of perspiration and relieving the discomfort of its excessive secretion must be both absorbent and deodorant. The use of so called astringents is both unnecessary and harmful as their local application is of doubtful effect and if effective is hurtful. The best deodorant is the frequent use of soap and water and change of garments but of course this is often impracticable. The next best remedy is liberal application of a deodorizing absorbent powder, formulas for which we give as suggestions for experiment and adaptation to special requirements. Of inocuous substances for such powders magnesium carbonate is probably the best as it combines with the fatty acids of the body to form inodorous compounds and it is capable of absorbing large amounts of moisture but it cannot be used alone as it becomes sticky and is also apt to irritate tender skins. Talcum powder is only slightly absorbent and while it partially overcomes the sticky feeling does not act as a deodorant and usually must be combined with some powerful scent to mask the odor of perspiration. Tannin, alum and zinc sulphate have been used in such powders but their use is not recommended as whatever effect they may have, if any, in checking perspiration is apt to be harmful as they close the pores and prevent the normal, healthy action of the skin. Formaldehyde is perhaps the best deodorant as it combines chemically with the fatty acids of perspiration and also acts as a preventative of oxidization, the gradual oxidization of these fatty acids forming the substances which give the offensive odor to garments and the body. A combination that has proven very effective contains magnesium carbonate, talcum and formaldehyde in the following proportions:

DEODORANT DUSTING POWDER.

Magnesium carbonate	60 parts
Talcum	40 parts
Formaldehyde (40 percent. solution)	2 parts

The magnesium carbonate and talcum should be in the finest obtainable powder; the formaldehyde solution is incorporated by trituration and sifting. The formula is given in parts so that it can be adapted to any desired quantity. Perfume may be added if desired, synthetic violet giving the best results as this is only slightly affected by perspiration and is agreeable to most persons. As formaldehyde is very irritating to some skins its solid modification, paraformaldehyde, is often used in such powders and is very effective in preventing decomposition and consequent offensive odors from perspiration. It may be used in the above formula in the same, or larger, proportion as formaldehyde. A somewhat different composition is frequently employed and while not so effective as a deodorant as the previous recipe it is very cooling and absorbent. A typical formula for such powders is the following:

HOT WEATHER COMFORT POWDER.

Talcum, powdered	50 parts
Rice starch, powdered	40 parts
Boric acid, powdered	10 parts
Perfume	sufficient

All the ingredients should be in the finest powder. The perfume is incorporated by trituration and sifting. A strong per-

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fume should not be used as this may be more offensive than the odor of perspiration itself to many persons; a dainty scent suggestive of cleanliness being really most effective. Zinc oxide and zinc carbonate are sometimes added to the above formula, five to ten parts per hundred being sufficient. Zinc oleate and zinc stearate are also used in some proprietary preparations but both of these have a tendency to develop an odor of rancidity and are only slightly absorbent of moisture.

Ext. Hamamelis aquos.—D. F., Ohio, sends us the following prescription:

℞ Tinct. arnic. .....ʒss
Ext. Hamamel. aquos., q. s. ad .....ʒii
M. et. Sign.: Local application.

He wants to know what is meant by "Ext. Hamamel. aquos."

The English translation of "Extractum Hamamelis aquosum" is "watery extract of witch hazel." This, of course, is the so-called extract of witch hazel or Aqua Hamamelidis or witch hazel water of the U. S. P. The physician evidently latinized the ordinary term "extract of witch hazel" to avoid confusion with the fluidextract he specified "aquosum."

Dental Cream.—L. Y. S., New London, Conn., sends a request for a formula for a dentifrice similar to a widely advertised make. Unfortunately we cannot supply this information as the composition of this dentifrice is a trade secret and its formula is known only to its manufacturers. However we can supply some excellent formulas for dental creams or dentifrices, any one of which will make an elegant preparation and probably equal to the special make referred to.

Before giving these formulas it should be said that the quality and keeping properties of these dental creams depend largely upon the care and the skill used in their manufacture, the secret of making a fine dental cream being thorough incorporation of all the ingredients and the use of materials in the finest obtainable powder. The usual tendency is to use too much liquid in reducing the powders to paste form, such pastes soon becoming too soft for dispensing in collapsible tubes. This use of an excess of liquid is apparently made necessary by failure to work the ingredients together long enough and thoroughly enough. It is surprising to the novice to find what a small proportion of a good excipient is actually required if the trituration or mixing be done patiently and thoroughly, therefore it is always best to begin with the minimum of excipient and to keep working the paste until it has the desired consistency. Where large batches are to be made it is advisable to use a machine for the mixing, an ordinary sausage grinder answering the purpose very well.

Either of the following formulas will give excellent dentifrices, the first perhaps yielding a preparation of better keeping properties and smoother. The directions, especially as to excipient, should be followed closely.

CREAM DENTIFRICE.

Precipitated chalk	16 ounces
Powdered Castile soap	1 ounce
Powdered orris root	1 ounce
Oil of rose geranium	1 dr.
Oil of cinnamon	½ dr.

These are the solids and the flavoring ingredients; the excipient is as follows:

EXCIPIENT FOR DENTAL CREAM.

Gelatin, best	120 grains
Glycerin	7 fl. oz.
Water	4 fl. oz.

Soak the gelatin in the water until softened then dissolve by the aid of heat, and add the glycerin. Label "Excipient." To make the dental cream proceed as follows: Mix the dry ingredients by sifting them together several times through a fine sieve, then transfer to a capacious mortar for manipulation. Pour in the center of the batch four fluidounces of the excipient and then work the mass with a pestle and rubbing until it ceases to show any dry powder and has become the consistency of a good stiff paste.

If the dentifrice is to be put up in collapsible tin tubes five fluidounces of excipient should be used instead of four, the latter being sufficient for a dentifrice to be sold in jars. If made by a machine larger quantities can be mixed at a time but the same proportions must be observed. Finally incorporate the flavoring oils or these may be added in the early stage of mixing. If a sweet tasting dentifrice is wanted add two grains of powdered saccharin to the dry ingredients before massing. The second formula is somewhat different and glycerin alone is used for massing the dry ingredients into a paste. It has valuable antiseptic properties and is not irritating.

ANTISEPTIC DENTAL CREAM.

Precipitated chalk	16 ounces
Powdered Castile soap	2 ounces
Sodium benzoate	1 dr.
Menthol	10 grains
Thymol	5 grains
Oil of cloves	15 drops
Oil of peppermint	15 drops
Oil of wintergreen	15 drops
Glycerin, sufficient to make a smooth paste.	

Reduce all the solid ingredients to a very fine powder and mix thoroughly by sifting; transfer to a large mortar and add four fluidounces of glycerin and work the mass thoroughly until all dry powder has been taken up and a smooth, rather stiff paste results. It must be remembered that as glycerin absorbs moisture from the air dental creams made with it tend to become softer on being kept, especially if not kept in closed containers. If a sweet paste is desired add two grains of saccharin to the above quantity of materials. When the paste is well worked up the flavoring oils should be added and the working repeated to insure even distribution.

The more all such mixtures are worked the better and smoother will be the resulting dentifrice and less excipient will be required, so that it will keep better. If the paste is too thick a very little water may be added, or the excipient may contain one part of water to seven parts of glycerin. Carmine may be used if a pink color is desired. The formulas given are types of two different excipients and combinations, a third excipient sometimes used is honey, used in the same proportion as glycerin, or honey and glycerin together can be used. The honey should be thinned to about the density of table syrup. Precipitated chalk is the basis of practically all tooth pastes or creams, powdered soap and orris root being other staple ingredients.

Pulvis Purgans.—G. S., Conn., has a prescription calling for

Pulvis Purgans .....gr. xx
Sign.: Take at one dose.

He inquires what Pulvis Purgans is, as he never heard of it. G. S. has evidently neglected to consult the United States Pharmacopœia, which authority states on page 676, in the index, that Pulvis Purgans is a synonym for Pulvis Jalapæ Compositus, or Compound Powder of Jalap, which is a mixture of

Jalap in No. 60 powder	35 Gm.
Potassium bitartrate	65 Gm.
To make	100 Gm.

Schluesselblumen.—E. H. inquires what "Schluesselblumen" are, a remedy used by Germans. He wants to know the English and Latin name. This is the German name for the flowers of Primula, the primrose or cowslip, a perennial indigenous to woodlands and grassy places of Europe and northern Asia and frequently cultivated in gardens. Primrose has been used medicinally since ancient times. Even Pliny speaks of its popular esteem as a panacea. It is still used, especially by the Germans, as a household remedy.

Menthol Valerate.—C. T., New Jersey, wants to know the ordinary or trademark name for "menthol valerate," also where same can be obtained and its price. The trademark name for menthol valerate or valerianate is validol. It is a colorless liquid, a combination of menthol and valeric acid, that is, chemically speaking, valeric acid menthyl ester. It is insoluble in water, but readily soluble in alcohol. It is used in hysteria and neurasthenia, in doses of 10 to 15 drops three times daily. It has also been successfully tried in seasickness and is best administered on sugar.

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O MISSING

The Estimation of Calcium Hypophosphite.—One and a half grammes of the sample are dissolved in 500 Cc. of water and 10 Cc. of this mixture are placed in a flask of 250 to 300 Cc. capacity having a ground glass stopper (Pharm. Zt., 1911, 901). To this are added 50 Cc. each of decinormal solutions of potassium bromate and potassium bromide. The mixture is then acidified with 10 Cc. of dilute sulphuric acid, when the flask is quickly stoppered and set aside in a dark place for an hour. At the end of this time 1 Gm. of potassium iodide is added and the flask is shaken in order to dissolve the vapors of bromine and is allowed to stand for a minute or two. The free iodine is then titrated with a decinormal solution of sodium hyposulphite. From the number of Cc. of this solution required 30 is subtracted, and the remainder, multiplied by 0.002126, gives the amount of calcium hypophosphite present in the 3 centigrammes of the sample which was tested.

A Modification of the Blood Tests.—It is stated (Chem. Zt., 1912, p. 93; Chem. u. Pharm., 1912, No. 13), that various of the blood tests, as the malachite-green, guiac or benzidin tests, may be rendered very much more sensitive by the addition of pyridin. This is done as follows in the case of the malachite-test: The substance to be tested is boiled for a few minutes with a 50 percent. potassium hydrate solution, to which a few drops of alcohol have been added. After cooling, it is shaken out with several Cc. of pyridin. The pyridin layer is shaken again with caustic potash solution to further remove impurities. One Cc. of the pyridin solution is then poured over a piece of filter paper, which is placed on a glass plate, and to it is added the leuco malachite-green solution with a little 1 percent. hydrogen-dioxide solution. The presence of blood is shown by a green color. This test will discover blood in dilution of one to a million.

Solvents for Celluloid.—A mixture of equal parts of acetone and amyl acetate is recommended as the best solvent for celluloid, but solution is slowly effected especially if the celluloid is old and has become hard and dry. A new method of dissolving celluloid with the purpose of forming a transparent waterproof varnish for technical use is based on its solubility in ethylene dichloride, which also dissolves rubber, the syrupy solution formed by dissolving celluloid to saturation in ethylene dichloride being diluted to any desired strength with either acetone or amyl acetate or a mixture of both. For making a transparent waterproof varnish for surgical use, to replace plaster for protecting slight wounds, or to make a strong pliable splint by saturating a muslin bandage, freshly cut strips of the transparent celluloid should be used, this being made from a soluble form of gun cotton. The name celluloid covers a multitude of varieties and only the soluble kinds are suitable for making solutions for surgical or technical use.

Chavosot is the name given to the methyl ether of estragol, which is claimed to be a powerful bactericide, especially valuable in dentistry. At ordinary temperatures chavosot is an aromatic, inflammable liquid, crystallizing at 15.1° C. and melting again at 15.8°. The boiling point under ordinary pressure is 229° C. On the addition of ferric chloride solution to a solution of chavosot in alcohol and water an olive green color develops; in aqueous solution the mixture becomes a light violet color. The agreeable odor of estragol is evolved upon the methylization of chavosot. This may be accomplished by adding a drop of chavosot to a 15 percent. soda solution, adding three drops of dimethyl sulphate and boiling, when the odor of estragol is evolved. Chavosot is highly recommended for use in suppuration and fistula following extirpation of the pulp. It is said to be five times stronger than carbolic acid as a bactericide, but it does not corrode deeply. It does not irritate the periosteum, does not discolor the teeth, and, unlike other bactericides, has not a disagreeable taste. The cases which have been treated with chavosot not only heal quickly, but the improvement is permanent. The preparation should be kept from light. It is made by the Chemischen Fabriken von Thaan and Mülhausen.

Collargol and Hydrogen Dioxide.— A German pharmaceutical house has recently described among its products a combination of collargol (1.0) and hydrogen dioxide (200.0) for use in the treatment of diphtheroid sore throats. The Apotheker Zeitung (1912, Nos. 14 and 16) remarks that such a combination is liable to be explosive, there being two cases on record where explosion had followed the mixture of these two substances. In the first instance, a physician attempted to make up such a mixture. The result was striking. The second accident occurred in a pharmacy, where the ceiling was most affected. It is said that the collargol acts in this instance as a catalizer just as a platinum sponge might do.

Spun Ointments, W. B., Sandusky, Ohio.—Spun ointments are prepared in England by a special mechanical process invented by a manufacturing pharmacist named Robert Blackie, of London. The word "spun" in connection with ointments has been trademarked by Mr. Blackie, and it was suggested by the finely "spun" appearance—silky—of the ointments prepared according to Mr. Blackie's method. Besides being a capable pharmacist Mr. Blackie is something of an engineer, and he perfected the machine which "spins" the ointments to the desired consistency. That is all the secret there is; the peculiar construction of the ointment mill. Any ointment, B. P., U. S. P., or private formula, may be "spun" with Mr. Blackie's machine.

Codeonal is a new hypnotic, consisting of a mixture of 11.8 percent. codeine diethyl barbiturate and 88.2 percent. sodium diethyl barbiturate. Codeonal occurs as a white powder soluble in thirty parts of water and in alcohol. It is odorless and has a slight aromatic and momentarily bitter taste. It is soluble in alcohol, chloroform or ether, in thirty parts of water, and insoluble in benzol, xylol and toluol. Codeonal is recommended as a powerful hypnotic in cases where reliable action is required, as in cases of nervous irritation and of allied troubles, such as dysmenorrhœa, night coughs, nasal and laryngeal catarrh, and in the preparation for narcosis. Codeonal is sold by Knoll & Co., the manufacturers, in a powder and in sugar-coated tablets, the dose being 0.3 to 0.4 drachms.

Cremules, a New Form of Troches, is suggested by Sir James Sawyer in the London Lancet, his aim being to encourage his professional brethren to prescribe medicinal trochisci from their own magistral formulas, while desiring to direct their attention to a new vehicle of a kind which he has found useful in practice—namely, the "chocolate cream." He refers to the fact that chocolate is made by triturating in a heated mortar the roasted seeds of the Theobroma cacao with an equal quantity of sugar, and making the mixture into a paste with water, having flavored it variously, as with vanilla or with cinnamon, and the "cream" is made by filling a small globular envelope of this mixture with a small portion of milk which has been mixed with sugar and evaporated to a paste. This is the paste, he says, which should be medicated from their prescriptions by the pharmacist. As an example he gives the following:

Menthol .....gr. 1/10
Ol. eucalypt. .....m ½
Pastæ lactis } .....āā q. s.
Pastæ nuclei cacao }
Fiat trochiscus, sec. artem.

Or, the pasta lactis in each trochiscus may be medicated by the addition to it of a grain or two of borax, or half a grain of sulphate of zinc, or a minim of oil of turpentine, or of oil of cajuput, or half a minim of oil of anise. The trochisci may be called "cremules" and, Latinized, "cremulæ." When quickness of preparation is to be wished for, unmedicated ones can be medicated readily by remedies which are liquid in their form, by injecting a minim or so of the medicament into the center of a "simple" cremule, by the aid of a hypodermic syringe.—Pharmaceutical Journal.

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Preparation of Acetic Ether.—Acetic ether may be obtained by the action of acetic acid upon alcohol, in the presence of some such reducing agent as the anhydrous sulphate of copper, zinc, magnesium, sodium or nickel. Kurtenacker and Habermann (Jour. Prakt. Chem., 1911, p. 541) recommend that a mixture of acetic acid and alcohol, proportioned according to the molecular weight, be warmed on a water bath with anhydrous sulphate of nickel. The acetic ether is then distilled at a temperature of 79° C., and is finally rectified.

Iodometric Estimation of Benzoic Acid.—The benzoic acid is dissolved in 50 percent. alcohol. To 30 Cc. of this are added 5 to 10 Cc. of a 5 percent. aqueous solution of potassium iodide and the same amount of a corresponding solution of potassium iodate (Pharm. Zt., 1911, 921). A certain amount of iodine, corresponding to the amount of benzoic acid present, is set free, and this may be titrated with a solution of sodium hyposulphite, using starch as an indicator. In food analysis it is preferable that the benzoic acid be isolated by the ordinary methods.

The Estimation of Uric Acid in the Blood.—This method, which is ascribed to Kowarsky (Pharm. Zt., 1912, No. 30), is carried out by saturating the concentrated serum, from which the albumin has been removed, with ammonium chloride. The uric acid is thrown down as ammonium urate, and may be collected by centrifugalization. The addition of a few drops of hydrochloric acid brings about crystallization, after which the uric acid may be identified microscopically or by the murexide test. The quantitative estimation is carried out by dissolving the uric acid in an excess of piperidin, and titrating the unbound piperidin with one two-hundredth normal sulphuric acid.

Composition of Urolysin.—According to Mannich and Schwede (Apoth. Zeit., 1912, 27,370), urolysin, widely exploited as a remedy for gout, is not a definite body nor does it contain the substance styled by its promoters "iodo-para-phenetidin-aceto-colchiceine." Their analysis shows it to contain about 2.5 percent. of potassium iodide, 3 percent of sodium salicylate, small amounts of colchicine and methyl salicylate and vegetable extractive in a vehicle of alcohol and water. No phenacetine or other phenetidine derivative could be detected in the mixture. Whatever medicinal effects it may have are ascribed to the well known therapeutic agents it contains.

Correspondence.

The Circulating Library in the Drug Store

Editor American Druggist:

SIR—Our friend, Mr. Minarcik, allows himself to be carried away altogether by what the chain stores are doing. The chain stores not only dabble in books, but, as everybody knows, in really objectionable side lines, such as watches, umbrellas, cut flowers, hair goods, coffee and numerous other lines unworthy to mention. In these stores the aforenamed are the essentials and pharmacy itself the side line. I am positive that such stores as these are not his standard of what a pharmacy should be. If it is, then I agree heart and soul with "Mr. Unsigned Communication." Is this the goal he has in view? I beg to differ with Mr. Minarcik by saying that the percentage of men ranking high in the profession of *pharmacy* who carry books as a side line is so small as to be almost incalculable. Dr. Charles D. Artois Francis, the chemist-physician, says, "Pharmacy is at the parting of the ways," the meaning of which is only too well illustrated by the present joint committee of the New York Branch of the A. Ph. A. and the New York County Medical Society for "certified pharmacies." This is the direct result of those who continually tend to introduce new side lines and of those who in turn have relegated the prescription department to some obscure corner.

No one is responsible for the action of another, but when any certain individual attempts to influence his fellow druggists into buying and loaning books he makes himself as objectionable as the side line he has reference to.

Were all men of the same ideas as Mr. Minarcik pharmacy would be one grand vocation in about twenty years. Yet some ask why pharmacy is not on the same level as medicine and why it is that the public today do not hold the druggist in the same esteem as the physician. The answer lies in Mr. Minarcik's reply to the unsigned communication.

This letter bears no animosity to our colleague, but is merely an exchange of ideas from one whom you assert is in the minority. J. M. BLOCH, 2190 Dean street, Brooklyn, N. Y.

AUGUST 12, 1912.

The Proposed Amendment to the Constitution of the New York State Pharmaceutical Association

Editor American Druggist:

SIR,—In justice to myself, will you kindly publish the following in answer to your article regarding my amendment to the New York State Pharmaceutical Association constitution? You state that the amendment was lost by a large majority, whereas I claim such a statement is misleading because there were less than forty members present at the time. How could any amendment be beaten by a large majority when there was only a small minority, or less than 3 percent. of the members present and less than half of 1 percent. of the New York state druggists?

I only ask for a fair and square deal and cannot understand why the amendment was not put on the official program, or else, why I was not, out of courtesy, notified at least twenty-four hours before the opposition was going to call for action on the amendment. It would appear that my opponents were not aware of the fact that some of the most active pharmaceutical organizations had endorsed the amendment, and might later on be inclined to inquire what corporate interests were at work to defeat it.

On page 69 you state that I asked for a reconsideration on the vote on the amendment, whereas I merely requested. I had a perfect right to request that my protest of the previous session be incorporated in the minutes of that session. I was not out of order, although I consider Thomas Stoddard was, in informing me the matter was settled, when it was the duty of the president to either have my protest incorporated or else put the matter to a vote.

I sincerely trust you will see your way clear to publish this letter, and thanking you in advance, I am

Yours very truly,

THOMAS LAMB.

BROOKLYN, July 24, 1912.

Books

BACTERIOLOGY FOR PHARMACISTS[1]

A notable contribution to the text books of pharmacy has been made by Prof. Albert Schneider, of the California College of Pharmacy in this compact, orderly and well arranged volume. Through the courtesy of the author and the publishers we print elsewhere a chapter from this book describing in detail the plan and fittings for the bacteriological laboratory in the drug store. The rapid development of this important branch of pharmacy is ample justification for the presentation of such phases of this subject as come within the special province of the pharmacist. Both author and publisher are to be congratulated upon the book, which not only contains much which is useful, but is presented in a most interesting and attractive manner.

[1]PHARMACEUTICAL BACTERIOLOGY, with Special Reference to Disinfection and Sterilization. By Albert Schneider, M.D., Ph.D., Professor of Pharmacognosy, Histology and Bacteriology, California College of Pharmacy; Pharmacognosist, U. S. Department of Agriculture. Published by P. Blaiston's Son & Co., 1012 Walnut street, Philadelphia. Price, $2 net.

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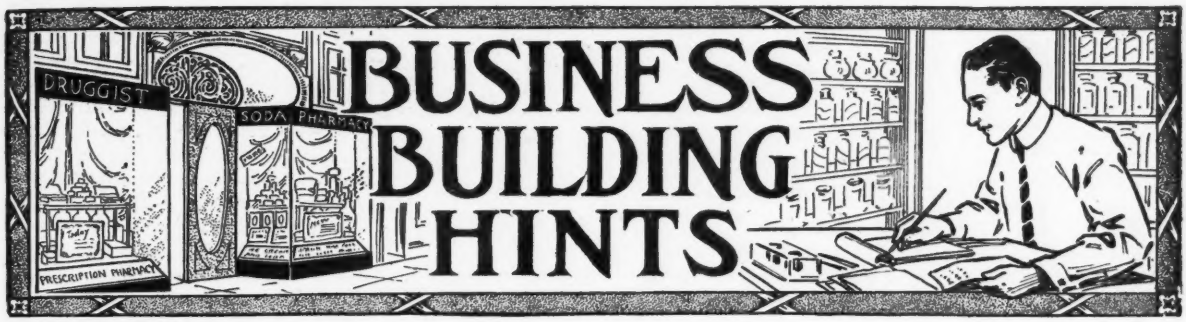

PRACTICAL SALESMANSHIP*

By Frank Farrington.

Author of "Talks by the Old Storekeeper," "Retail Advertising—Complete," etc.

The Personality of the Salesman

THERE is big money nowadays in the selling end of the big businesses and there ought to be good money in the selling end of any business. The volume of business and the profits of the business depend to a greater extent upon salesmanship than most retailers realize.

The reason for the failure of many a drug business is the lack of ability to sell goods, either on the part of the proprietor or of his employees. Whether the business is so small that the manager of the store does most of his own selling or so large that it is done by salespeople, the rule is the same. The better the salesman, the larger his sales. To develop the selling power of the people who meet the customers is to develop the business itself.

In order to be a success as a salesman one must first be a success as a man. It is necessary to begin at the beginning. If it is too late to begin at the beginning, then it is necessary to begin as near the beginning as possible. That is right away. It will never be any earlier.

There are a few so called "born salesmen," people to whom the art of persuading others to buy is as natural as it is to eat or to breathe. Such persons are comparatively few and they need little instruction, though the individual who can learn nothing about his work from others is indeed a wonder.

A salesman should begin with his personal appearance. This does not mean that he should wear his Sunday-go-to-meeting clothes every day. That would be overdressing for the part and it would be a mistake in any business. He should be well but inconspicuously dressed. He is well dressed whose clothes attract no attention.

Of course, we must all dress for our work, and the soda clerk or the prescriptionist who is compelled to go behind the counter while engaged in his own peculiar labors cannot lay off his white jacket and put on a frock coat. The employee who is suitably dressed for his work and whose dress is clean can offend no one. It must be remembered first of all, though, that no one is ever suitably dressed unless his clothes are clean.

There are a good many people, customers and buyers, upon whom clothes may have little or no effect, but even they will not be unfavorably affected by clean, attractive and suitable clothes.

Nobody likes to do business with any one who is offensive in any particular or in any degree. An unpleasant breath, dirty linen, blackened teeth, unkempt hair; all these send somebody away or affect somebody adversely, though the customer may not in any way give the slightest hint of it.

Bear in mind that I am not accusing the selling members of the drug trade with any greater laxity in such matters than any other class of business people. They no doubt are in a class above most others. But we are all likely to become slack in matters of dress or care of the body. The individual who never does backslide in such directions is not in need of advice, but there are a good many who need to be prodded vigorously and constantly.

Physical condition, too, has more to do with selling success than we are apt to think it has.

To be a good salesman, to be fit to compete with the brightest of competitors, a man needs to be right on his tiptoes when he is talking with a prospective purchaser. He must be alert in every sense. His mind must be keen and his wits nimble.

Can any salesman fulfil these conditions after a night out with the boys, or when his mind is befogged with alcohol and tobacco?

There have probably been instances where a salesman has apparently succeeded though addicted to all manner of vices. But no matter what the facts of his success may be, if he has had any, it has been in spite of the handicaps and not on account of them.

There are enough unavoidable and involuntary handicaps and disadvantages in business without a man voluntarily loading himself up with unnecessary ones.

He should not only have no handicap of ill condition to overcome, but he should, if it is a possible thing, be so fit at all times as to possess an advantage over the other fellow who is less careful.

The big organizations of selling men who are employed by the most successful manufacturing concerns of the country are nowadays giving the most careful attention to matters of physical fitness. They know that no man or woman can do high class work when in low physical form.

Can a salesman sell expensive grades of sundries to an objecting customer asking for some other sort when he has the toothache or a headache, or even when he feels dull and listless?

Druggists as a rule have less time to get outdoors for exercise and recreation than retailers in many other lines. This is a disadvantage that should be overcome whenever possible by *taking* time for outdoor recreation in winter and summer alike.

There is one quality that spoils a man for successful salesmanship. It is a common quality, one that most of us have at times—laziness. It means the absence of energy. Nobody ever heard of a lazy hustler. Nobody ever heard of a man succeeding if he possessed the habit of letting whole hours slip away in idleness. There is absolutely no time to be lazy if one is to succeed.

This has nothing to do with vacations. Every man needs rest, but rest is not laziness. It is simply the necessary relaxing that allows the mind and body to come back.

While one is on duty he should cut out mental and physical laziness absolutely. He should be filled with an energy that keeps him looking for work.

We are fond of calling the commercial successes of today "live wires." That is what they are every minute they are on duty. They may let down and shut off the current of energy while they are away from business. It is wise that they do. But did you ever see any of these live wires loafing on their jobs? As a matter of fact, they rarely loaf anywhere.

The man who has achieved success in his business or established a trade that he knows will last out his lifetime may be able to afford the luxury of taking it easy during working hours,

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though he probably will not do it. But he who has not yet reached the height of his ambition, and that means about nine hundred and ninety-nine men in a thousand, cannot spare time to loaf. He needs to put in all the time not required for rest and recreation in either doing or learning how to do.

Now, I know some employees are going to read this who will say, "That's all right, but you needn't think I'm going to work myself to death and lose all the fun of living for what pay I'm getting."

The man or boy who takes that attitude makes a mistake. He probably does his employer some injustice, but he does himself infinitely more.

The employer is entitled to get more work from his help than he pays for or he will not make a profit on them. But if he has an employee who does not make good, he can let him go. The salesman himself cannot do his employer any more injustice than the latter is willing to permit.

But that salesman cannot get away from himself. By shirking and soldiering he is robbing himself of the advantages of experience and he is saddling himself with the qualities of a quitter.

If a man expects to be a success some day he must begin right now to develop the qualities required for success. Success comes because the man has developed the qualities that make it. It never works the other way. No man ever became a success and then developed the necessary qualities afterward.

The good salesman is not the result of a day's study. Salesmanship is not to be picked up at odd times. It is not a smattering of this and that. It is a well developed mental quality, and it comes only with a course of hard training in the school of experience.

The good salesman must have the courage to stick to the learning. Sticktoitiveness counts for almost more in salesmanship than in any other line of work. The man who cannot stick cannot sell drugs or anything else. He may be able to hand out a bottle of patent medicine or a tube of tooth paste when it is asked for, but his usefulness ends with the absolute demand of his customer.

A man must stick in order to learn salesmanship and he must stick after he has learned it. If he is easily discouraged and cannot get over that unfortunate quality, I would be inclined to advise him to get out of the business of selling.

Still, when one comes to look over the field of vocations, he is quite apt to find that the places where no sticking quality is needed are practically all filled—with failures.

I advise a man who would be a good salesman to read. I advise him to read his trade journals and the literature about the goods he sells, and I advise him further to read some good literature of a general sort every day to develop his mind and his vocabulary.

It may seem foolish to try to learn selling out of literature of the real literary sort, but every statement made to a prospective buyer loses or gains something in the way it is made, in the words used, in the arrangement of those words. This may sound rather extreme, but it is perfectly true. The men who have made the good literature of the country, the strong writers of today and of other days, know how to express statements in the way that gives them their full value with the reader or listener.

By reading just a page or two of that kind of literature every day one is certain of insensibly absorbing some good language and of learning some new words that can be made to bring in a money return when the right time comes. The talker, the salesman who uses poor grammar, labors under a handicap just as surely as he who uses liquor and tries to mix it with his business.

I believe that any man can be or do almost anything he sets out to be or do. I believe that even for the average man success is possible beyond anything that he himself realizes. The trouble with too many fellows is that they set out with the idea that they can accomplish only so much. They place a limit on their ability and naturally they cannot rise above that limit.

Every salesman should assume that he is competent to handle any class of trade. He should acquire a self-confidence that will enable him to hold up his head in any company.

If he limits himself in his selling ambitions he will never be a salesman. He will stop at being a clerk, an order taker, a mere puppet. But if he says to himself, "Why can't I get that rich Mrs. Hoggenheimer to buy all of her toilet supplies here instead of making only occasional purchases?" and if he sets about accomplishing that very thing he will one day find that he has added Mrs. H.'s trade to his list.

The man who does not aim high will never shoot high, and the dealer who shoots at the penny, the nickel, the dime, will get no more than he shoots at. He will not hit the dollar trade. A salesman should make up his mind to get the best trade, to hold the business of the high class occasional customers, and then study how to do it.

When a man knows a high class salesman in any line of goods and has the opportunity to watch his work, he should watch it at every chance. He should see how he sells the goods. He should, if necessary, go and buy from him in order to see how he works a customer from an expectation of buying something worth 25 cents up to the actual purchase of a dollar article.

Every clerk should get the high class bug in his bonnet and keep it there. If first efforts along that line of work meet with failure it is well to remember that few things worth doing are done easily or properly at the first attempt.

One day I was standing in a drug store when a woman came in and asked to see some hair brushes. The young man in charge brought out four or five brushes of as many kinds and threw them all down on the showcase in a row, naming the prices as he laid them down.

Then he leaned back and looked out of the window while the customer looked over the brushes. The woman evidently did not know much about hair brushes from a technical point of view. She shoved aside the cheapest one and the highest priced one and then paused undecided between the 75-cent and one-dollar qualities. The two looked much alike, though I knew that the better one would wear nearly twice as long as the cheaper. However, the clerk stood there and said not a word until at last the woman decided on the 75-cent brush and took it. She would have taken the dollar brush, which paid a better profit, and which would have given better satisfaction if she had received the least encouragement or if a single reason had been advanced by the man behind the counter.

A slot machine would sell goods as well as that kind of a clerk. It would sell them better, for it would work overtime without complaint, and it would never make mistakes or disgust a customer by lack of attention and interest.

Few salesmen treat every customer as an opportunity. They make it their business to sell the goods that are asked for, and no man ever becomes a hundred point salesman on that basis.

Michael Angelo said, "Trifles make perfection, but perfection is no trifle." We are too apt to think that this or that little thing is not of enough importance to bother with, when as a matter of fact the great things are all made up of little ones.

All the qualities that go to make a man help to make the successful salesman. Honesty, industry, sobriety—every one of the homely old virtues counts in salesmanship.

The salesman cannot show qualities that the man does not possess. The man will show through the front of the salesman and attract or repel the people to whom he is trying to make sales. You may think that in so far as your business with your customers is concerned it does not make any particular difference what kind of a man you are underneath the surface you intend to show. You are all wrong. You do not give the general public credit for the discernment it actually possesses.

If you are not honest at heart your customer will find it out, and nothing that you can say about your goods will bear the stamp of sincerity, no matter what your accent, intonation or language.

(To be continued.)

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Bookless Bookkeeping

How to Avoid Duplication of Work in Accounting—A Saving of Three-fourths of the Bookkeeper's Time—Keeping in Close Touch with the Business

BY FRANK E. GOODWIN

BOOKKEEPING is the recording of the financial transactions of a business, both debit and credit—no more or less. Ancient ideas in this respect do not conflict with those of more modern origin. Both assert that a true and comprehensive record must be kept for future reference and for the completion of the account. From that point the ancient and modern methods take widely divergent roadways.

Single and double entry bookkeeping, as taught in the schools and business colleges, travel the same path over and over again. Modern methods contemplate arriving at the desired end by traversing the shortest route. The majority travel the old, well beaten paths, because these are the paths they have known and out of which they dare not venture. A few have braved the scorn of others—sought shorter and straighter roads, and reached the same desired point much earlier and easier than the others.

The ideal method of bookkeeping is one which demands that if only one mark need be made, where two have previously been used, one mark is all sufficient.

Why keep repeating the same record time after time to its end when but one or two makings of that record is sufficient for all necessary purposes? This question the writer has asked hundreds of times of both professionals and novices. Their replies have been made by a shake of the head and the assertion that "they know no better way." The trouble is that until very lately bookkeeping has been purely mechanical, with the bookkeeper never daring to think for himself. He learned ancient bookkeeping, and rather than risk scorn at being a visionist, has practiced ancient methods to his end.

It was stated in an earlier contribution to the AMERICAN DRUGGIST that single and double entry consisted of a cash book, day book, journal and ledger, with intermediary books of record to complete the finality. The sales are first made and the transaction is either recorded by the cash register or sales slip. That sale is transferred to the day book and when that is completed for the day its different parts are again transferred to the cash book and the journal. From the journal the record is again dissected and the debit and credit items carried to the ledger.

Bookkeeping as it is practiced by the great majority is an endless chain—transferring and retransferring items and accounts continually.

At the risk of being declared a mere theorist, the writer asserts that the ordinary bookkeeper makes at least three marks on his records where but one is needed. This statement is not made upon the impulse of the moment, but has been arrived at and declared after having installed a system into several retail stores in place of the ancient methods. By trial of months the new idea was declared to save forty-five minutes in every hour's time of the regularly employed bookkeeper.

This system, which will be described in the next few pages, may be well called bookkeeping without books.

The three necessities are:

Duplicating sales slips; disbursement slips, and a nonduplicating ledger.

The duplicating sales slips of any make may be used, so long as they bear in duplicate consecutive numbers for future reference, if needed. These can be obtained from any one of a number of different manufacturers, and are usually kept in stock by large stationers.

The disbursement slips were described in the AMERICAN DRUGGIST for October 10, 1910, and may be printed by any local job printer at small cost. These must bear consecutive numbers, as well, and a letter to designate them from the sales slips is preferable.

Disbursement Slip

The following description of the disbursement slips referred to is reproduced from the AMERICAN DRUGGIST for October 10, 1910:

These disbursement slips contemplate doing away with all entries of cash expended on to the cash book, and transferring these entries to the journal and thence to the ledger. If these slips are used the transaction is entered upon the blank, and such as it is necessary to keep permanent record of are transferred direct from these to the ledger.

DISBURSEMENTS.

No..... Date.....191....
Paid.....
For.....
.....
.....
.....
Amount.....

Received Payment
.....

DISBURSEMENT SLIP—Make all payments of expense and on account with an accompanying record as above. Use in transferring the Nonduplicating Ledger, and file any slips which require permanent record to be made. See accompanying article.

The disbursement slips should be numbered consecutively and padded either 50 or 100 in a pad.

Those used each day should be properly dated. Upon the line "Paid" is written the name of the person to whom the money goes. What payment is for is written on the following lines and the amount on line indicated. If a receipt is desired or required have the party receipt the slip on the bottom line. This completes the preliminary record of the transaction.

If still further permanent record is wanted the posting to the ledger is done direct from these blanks, and in the column of the ledger headed "Folio" is written the number of the blank, and the details of the transaction can be copied, if desired. If these slips are filed, either by consecutive number or by alphabetical letter, this is not necessary, because the merchant or bookkeeper can, by referring to the "Folio" tell at once what the number of that transaction was, and the record can be located immediately.

To total the expense and at the same time classify it, the merchant or bookkeeper, at the close of business, or whenever necessary or desirable, takes all of these disbursement slips and separates them into divisions, or piles, for entry under their appropriate heads. A check should be made as each is handled. If two or more are found which total under one classified head, the amounts are added together. When all have been entered, add the totals entered in the expense book and the totals of all the disbursement slips. If they tally, or balance, the expense record for the day is correct, provided a perfect balance of all disbursements has been found as suggested earlier in the chapter.

To expedite the separation of these slips where a large amount of business is done, it is well to tear off one corner diagonally of all slips used in paying accounts. When running through the day's collection the latter slips are put into one pile to be entered later on the ledger.

This method is highly recommended as a considerable saving of time and labor. The slips can be varied or changed to suit the moods or conveniences of the merchant. The one given has been successfully worked out, however, and in use saves from 50 to 60 percent. in time of bookkeeping.

The nonduplicating ledger is something novel in the keeping of accounts, and is entirely different from any known form of ledger ever made or used. In truth it shatters all traditions of bookkeeping, and yet several expert bookkeepers who have used it have acknowledged that it is the longest step in modern store accounting that has been made in years, if ever.

The nonduplicating ledger (so called because it eliminates the

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necessity of copying or transferring anything that is unnecessary for the intelligent recording of an account) is not patented nor copyrighted, and any one may, with perfect liberty, employ his home printer to manufacture it.

This ledger is a card of index bristol board, 5x8 inches in size, ruled and printed as shown in the accompanying diagram. The first line near the top is for the name of the person with whom the account is opened, either as debtor or creditor. Directly underneath are lines for writing post office address, town and state, if that information is needed. To the extreme right is a blank space for writing the credit rating and credit limit of the party, if he be a debtor and the information is needed.

Three and three-quarters of the left part of the card is given to the record of transactions which make the patron a debtor to the proprietor, or in case the account is opened by the proprietor with the manufacturer or jobber, the purchase transactions are here recorded.

At the first column is the date of purchase, corresponding with the same date on the duplicating sales slip or invoice.

The second column, headed "Folio" is for the serial or consecutive number of the sales slip describing the corresponding sale, or the store's own number of invoice received. The third column headed "Item" describes the goods purchased, and the fourth column the total amount of the purchase. In these respects this ledger does not differ greatly from other ledgers.

In making a sale the clerk or salesman writes on the duplicating sales slip the date of purchase, name of buyer, goods bought, and amount, indicating either by putting in the right hand column of the slip the cash received, or otherwise indicating whether it is a cash or credit sale. This slip is filed upon a spindle or other convenient place for subsequent entry in the nonduplicating ledger. If it is deemed necessary this sales slip is filed in an alphabetical card index system. If no further use of it is felt the slip may be destroyed.

It will be seen that the permanent record is made direct from the sales slip to the ledger and obviating the necessity of using either day book, cash book or journal.

When payment on account is made, if at time of purchase, that part of the transaction is indicated on the sales slip and transferred to the right hand side of the ledger by first writing the amount, then the date, "Folio" or number of the sales slip and the balance due in the fourth column.

If agreement is made to pay at some future time, whether verbally, in writing or by note, the date when account is to be paid is indicated in the fifth column. If interest is charged the amount is written in the sixth column when paid, and discount, if any allowance is made, occupies the last column.

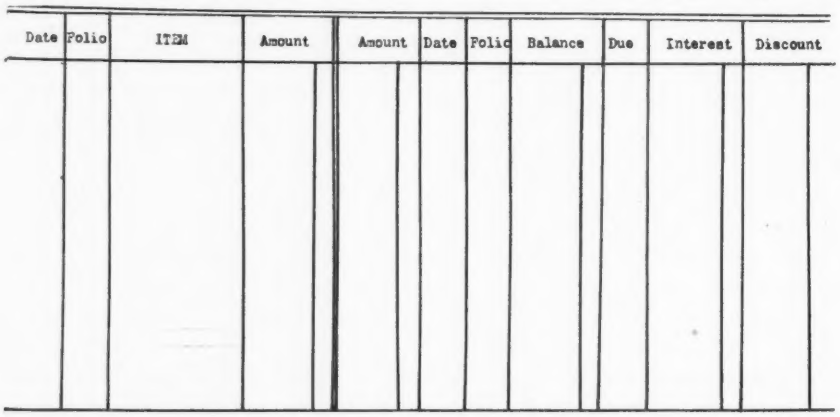
If money is paid to any one whose account appears in the ledger, record is made from the disbursement slip bearing the written attestation of the transaction. This slip is retained and filed if it contains matter of which record is necessary or desirable.

The great convenience and labor saving properties of this system of bookless bookkeeping may not be at once apparent. But when it is considered that only two records and one transfer are made of all financial transactions, and that all unnecessary writing is eliminated, the reader must confess that great saving of time will be effected.

It will be noticed that the fourth and fifth columns are identical, divided by a double line. The first is the debit, the second the credit amounts. They are placed close to each other, instead of being widely separated, to expedite the work of balancing and comparing. Experience proves that two divisions of figures close to one another can be handled with greater ease and accuracy than if placed in any other position.

Druggists are requested to give this form of ledger a trial, at least. It will be found a model of compactness, being concise, simple and easily understood by any accountant who may have occasion to handle the books.

In the ordinary run of business sales are made in two ways—for cash and credit. Money is received for two considerations—goods immediately purchased or a purchase made in the past (cash sales and collections). Money is disbursed for two purposes—expenses and payment on accounts.



CARD LEDGER FOR BOOKLESS BOOKKEEPING.

Cards as above will be furnished by the AMERICAN DRUGGIST at $1.00 a hundred for 3x5 or $2.00 a hundred for 5x8.

These three divisions are all there is to the financial end of any business. All the bookkeeping that is necessary is, therefore, just sufficient to record the transactions in these three divisions, and no more. With the exception of the perpetual inventory, which has for its purpose the proper classification of goods bought and sold, and the profit and loss in each line, the writer sees no material benefit in loading the bookkeeper up with a lot of books. In fact, the ledger into which are transferred the different accounts as shown by the sales and disbursement slips, the perpetual inventory, and either a weekly or monthly recapitulation card, are all the permanent records required in any retail business.

This being true, there is no need of books. A small filing system for the credit sales and payments on account; another for the disbursements which the owner wishes to keep a record of, and a third for the nonduplicating ledger scheme, will complete all of the necessary records for the most pretentious retail business, no matter what its character may be.

For comparison and frequent examination the writer advises the use of either a weekly or monthly recapitulation card, in which each day are entered the totals of every financial transaction of the business.

This card may be 4x5 or 5x8 inches; the latter size will probably give the most satisfaction. It has ten spaces from top to bottom and eleven from left to right, with space at the top for writing the day of week which ends the recapitulation. An

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illustration is given of this card which is very comprehensive in the detail covered, and the completeness with which daily, weekly or monthly comparisons may be made. The first column carries the date of the transaction; the second column the cash sales, third credit sales, and fourth column the total of all the sales. The fifth column states what is paid on account; the sixth the expenses (learned from the disbursement slips) for the day. The seventh column gives the total of these, which is the total of all the money paid out.

The last three columns have to do with the purchasing end of the business. On any date on which goods are received the amount of invoice, or invoices, is entered, together with the freight, express or delivery charges placed in the proper column. In the last column is the total of these two, which is the total of goods received that day. In taking the weekly totals the amount in the first space across is not added, but is afterward made a part of the grand total and carried forward to the next week's card.

RECAPITULATION FOR WEEK ENDING.....191.....

	Cash Sales	Credit Sales	Total Sales	Cash Rec'd	Paid on Account	Expense	Total Paid Out	Invoice Goods Rec'd	Freight Express Deliv'y	Cost Goods Rec'd
Bro't For'd										
Date										
Total Week										
Grand Total										

RECAPITULATION SHEET FOR CONDENSED WEEKLY SUMMARY.

When filled out these cards, which may be made either 3x5 or 5x8 as desired, furnish an invaluable record for comparison. These cards will be furnished by the AMERICAN DRUGGIST at $1.00 a hundred for 3x5 or $4.00 a hundred for 5x8.

As one of these weekly recapitulations of business covers six days' business only fifty-two are needed for the year. At the close of the year, they will be filed conveniently for instant comparison with records which follow, and make one of the most valuable additions to a retail business.

By means of the weekly recapitulation the merchant can instantly tell what his cash, credit and total sales have been for any given week, or month, or from the beginning of the year to date. The expense account is given in total. If the amount of collections requires to be known, simply subtract the amount of cash sales from total cash received. Total cash paid out subtracted from cash received will at once show how much cash should be on hand. The total of cost of goods from the first of the year subtracted from the total sales, gives the gross profits for the same time. The gross profits for a week or month may be determined the same way. The total of expense divided by the total sales will show the cost of doing business in percent. for any given time. The total expense divided by cost of goods received will give practically the exact percent. of selling costs as computed on the cost of the goods.

As a matter of comparison the value of the weekly recapitulation can hardly be overestimated. If a merchant will keep these records for eighteen months and then compare any week with the corresponding week of a year ago, he will learn some things about his business he never dreamed of before. It will show how sales are going, how collections compare with a year ago, and probably why they are better or worse. These cards will give instant comparison of expenses, goods bought and all such little minutia of one's affairs which are good to know.

VALUE OF WINDOW DISPLAY.

The different methods of advertising which the dealers employ should all be based at a given time upon the window display. Every retailer should have his window decorations harmonize with the literature of the moment, says the Paint, Oil and Drug Review. When house paints are being advertised, the window display should be of house paints; when enamels and other interior specialties are being advertised, then is the time to display these in the show window, etc. The same principle applies to the retail drug trade.

The value of the show window as an advertising medium should not be underestimated. It is the pulse of the entire institution. The greatest skill and taste should be displayed in the arrangement of a window, and some novelty exposed to attract the passing public.

The simplicity with which this can be accomplished is almost childish. The writer has in mind a window which is attracting a great deal of attention. The articles were all staples and would harmonize with a paint dealer's window. In order to attract the public, the following simple device was arranged: An electric fan was placed in the centre of the show window on its back. From the brass guard around the fan, white string ran to the ceiling. The pieces of string were tied close together at the base, or fan, probably an eighth of an inch apart, and at the top were not over two inches apart, thus forming a cone. Inside of this cone-shaped arrangement of white string (colored string or ribbon could be used, of course) were placed six or seven toy balloons, and sufficient current was turned onto the fan to keep these balloons in motion.

This simple device attracted thousands of people, and during the display it was difficult at times to pass by on the sidewalk. This window accomplished its purpose, and its value as an advertising medium cannot be overestimated. Scores of similar devices can easily be arranged, and the drug business in itself is so diversified that almost any novelty that would attract attention would be in harmony with the business.

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MAKING THE START IN SODA WATER. IV.

By Ed. Ward.

(*Continued from page* 163.)

The Syrup Room

The syrup room is an important place in every drug store that has a fountain. If possible the druggist should have a separate room for this purpose. If this cannot be done, a certain part of a room should be set apart for this purpose and used exclusively for fountain supplies and syrup making, and drugs should never be allowed to get mixed up with them. A separate set of measures should be secured for syrup work and they should never be used for anything else. A mortar and a couple of graduates to be used exclusively for syrup work should be a part of the equipment. Where there is a good dry cellar a room partitioned off in it furnishes a good place for syrup making. A dumb waiter from this room to the fountain is a handy thing to have. Syrup room equipment is simple. Plenty of shelf room is needed for storing fruit stocks and crushed fruits. A certain shelf should be set aside for finished syrups. Order and system in a syrup room save both time and money. A good, solid work bench is needed. Among the small things needed in a syrup room are a fruit (meat) chopper, a grater for grating oranges and lemons, a full set of measures,

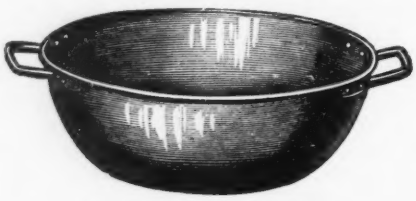

Fig. 9.—COPPER COOKING PAN.

copper or aluminum ones preferred, plenty of dishes, etc. For syrup containers gallon jugs or the half gallon jars that crushed fruits come in will answer. Where larger containers are wanted stone crocks are fine. For a simple syrup container nothing is better than a galvanized ash can, with a brass syrup gate put in it and a cover which has had the seams soldered. This is easy to clean and will last for years. For a small soda business a copper washboiler will answer every purpose. A good sink is an absolute necessity, as cleanliness must be paramount in the syrup room. A supply of hot as well as cold water should be arranged for if possible, as this saves the time necessary to stop and heat water for washing purposes. For cooking purposes nothing quite equals a confectioner's gas stove for a syrup room. One of them is shown in Fig. 8. If there is no gas supply to be had a gasoline or even a coal stove of this type will answer.

For cooking chocolate syrup nothing equals a confectioner's copper pan, one of which is shown in Fig. 8. They cost a good deal at the start, but are cheap in the long run. Only by being very careless is it possible for the syrup maker to burn a batch of syrup in one of these kettles. They can be obtained

Fig. 8.—CONFECTIONER'S GAS STOVE.

in a variety of sizes. One that holds 5, 8, 10, or 15 gallons, according to the amount of syrup made at a time, will prove to be best for the druggist. The syrup room must be kept clean. It must not be used as a store room for junk. Throw away old bottles, jugs, etc., which cannot be used and no one will buy from you. Don't let them accumulate.

In making his start in the soda water business the druggist will find that it is of the utmost importance to have things right at the fountain itself, both as to the drinks served and the manner in which they are served. First, then, the druggist should exercise care in the selection of the sundries to be used.

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Fountain Sundries

To this important subject we can give but a brief glance. First of all, when making a start, the druggist should reserve enough funds to enable him to have all needed utensils and not put all his money into his fountain. Just what he will need will depend, of course, upon the size of his fountain and the amount of business he is going to do. But there are some things that even the smallest druggist must have. He must have a good shaker for egg and fancy drinks. Each dispenser should have his own, except where there is a Cyclone electric mixer, and also a julep strainer. He needs a good lemon squeezer and also a cork puller if bottled mineral waters, etc., are served. In the glassware line there are fruit bowls, phosphate bottles, soda, phosphate and fancy glasses for special drinks. Spoon holders, straw holders, etc., can be made of silver if preferred. There are also the holders, soda spoons, sundae spoons, sundae cups (glass ones can be used), etc., all of which must be carefully selected, with a view to good service and an attractive appearance.

There are many designs in nearly everything needed at the fountain and we are unable to illustrate them all, but give a few suggestions in the accompanying illustrations. The principal thing is to select good plain designs that are easy to clean and keep clean. Fancy work in silverware makes it hard to keep clean. Glassware full of grooves and hollows may look nice, but they make it hard to keep clean. In fact, it is impossible to keep such elaborately cut glass looking as we would like to have it. Colonial designs in glassware will be found very serviceable for fountain use. They are plain but rich, and if kept bright and shining always look well. Crushed fruits are unusually attractive in this style of bowl, which can be obtained in a number of designs. Fig. 15 shows some good designs in crushed fruit bowls. We show them simply as a suggestion, because such bowls are easy to keep clean and the fruit looks nice when in them. Fig. 16 shows a few Colonial fountain necessities, fruit and egg bowls, punch bowl, parfait glass, phosphate bottle, spice shaker and straw holder. Do not litter the fountain with useless dishes. A few fancy glasses can be used for decorating the back bar, but do not have too many of them. They must be kept clean and that takes time. In these days of fancy sundaes there are a few fancy dishes that even the beginner should have, for, while his business is not going to be largely fancy sundaes, still one should be in a position to serve a few things in odd glasses, which look well and make customers ask questions and wonder when they see them around. Make it a rule to keep the serving counter free. Don't litter it up with candy, pots of flowers, etc., as is so often done. Keep the decks cleared for action. Fruit bowls are permissible, as crushed fruits sell better when they are displayed so that they can be seen.

Displaying Crushed Fruits

In the modern fountain the crushed fruit bowls often form a part of the fountain. This affords a means of keeping the fruit in better condition, but it does not sell as much crushed fruit as does the separate display bowl. Nicely prepared fruits are very tempting to the eye. If the fruit containers in the fountain are used it is a good plan to have a couple of bowls and each day display a different fruit; in this way, one at a time, the druggist calls the attention of his customers to the entire line of crushed fruits.

Ice Cream Dishers

At every fountain there should be proper facilities for dishing ice cream. Either the cone or mound shaped disher may be used, though to my mind the former is preferable for general purposes, though a cone-shaped disher may be used for sundaes and a mound-shaped disher for ice cream soda. At least three sizes of dishers are needed at the average fountain. A No. 10 cone disher will answer for both ice cream and sundaes by filling it rounded full for a plate of ice cream and even full for a sundae. A No. 12 disher should be used for an ice cream soda. Some use the No. 10 even full, and thus save one disher. A No. 20 disher is necessary for fancy sundaes, and this may be used well rounded in preparing such formulas as call for a No. 16 portion of ice cream.

What to Serve

In making the start perhaps there is nothing that is more puzzling than to know just what to serve amid the hundreds of drinks and sundaes. The most that we can say must be in the way of general suggestions. First, then, what syrups shall the

FIG. 15.—CRUSHED FRUIT BOWLS.
A few plain colonial designs in crushed fruit bowls. Easy to keep clean and attractive for display.

druggist select? For the first twelve we recommend the following:

Twelve Standard Syrups

Chocolate,	Ginger,
Vanilla,	Maple,
Lemon,	Raspberry,
Orange,	Sarsaparilla,
Strawberry,	Coca Cola,
Pineapple,	Cherry or Wild Cherry.

These really are the principal syrups. To them can be added, if desired, coffee, an excellent seller when it is really good; root beer, ginger ale, grape, creme de menthe or peppermint, and spearmint, the latter being specially useful in preparing fancy drinks, also makes an excellent phosphate. Twelve syrups should be plenty at the start and the selection given is a good one, but can be varied to suit the individual needs of each druggist, or, rather, of his patrons.

Crushed Fruits

The beginner will find three crushed fruits enough for regular work; the best ones for general purposes are strawberry, pineapple and cherry. If one more is desired add raspberry or peach.

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However, if the first three are always on hand, and raspberry, peach, cantaloupe and blackberry are added when in season, this will be enough. Some who use crushed fruits drop the syrup of the same flavor because a few phosphates are sold; especially is this true of strawberry. If the dealer will push it, pineapple phosphate should make a good seller. Be sure and have the fresh fruit in season, putting them on the counter as soon as they can be obtained. With the above syrups and fruits a goodly variety of sodas, phosphates and ice cream sodas can be served.

Sundaes

Of course the druggist must have sundaes, and for their preparation should have at his fountain, besides the above syrups and crushed fruits, chopped nut meats, walnuts at least, and pe-

FIG. 16.—FOUNTAIN GLASSWARE SUGGESTIONS.

Neat, plain ware that looks rich and is easy to keep clean. Figure shows two fruit or egg bowls, straw holder, spice shaker, punch bowl, parfait glass and phosphate shaker.

cans if possible; whipped cream, whole bananas, which can be purchased a few at a time, and whole cherries for decorating. Marshmallow dressing is also a desirable addition to the list of dressings. With these supplies on hand quite a large percentage of the plain and fancy sundaes sold can be prepared.

Buying the Supplies

We cannot close this article without a word of caution. In purchasing the fruit stocks, crushed fruits, cocoa and other supplies, the druggist should not hesitate to purchase the best. I do not mean that he must pay a high price for a name, but he must buy good goods, and it is not necessary to tell any intelligent druggist that no one can sell him really good goods at a very low price. When he makes the start he should make as careful an investigation as he can, purchase his goods from a reliable source, and then continue to use the same line until he is sure he has found something that will really suit his trade better. By this I mean that he should not, for example, buy his cocoa first from one house, then from another, and thus have something different every few weeks. It is not necessary to buy all or nearly all his supplies from one source, although it is very convenient in some ways; but wherever he does buy them he should have each syrup and crushed fruit the same each time and never change except for the better. When the public finds a drink the flavor of which pleases, it likes to feel certain that it can get the drink with just the same flavor the next time it comes to the fountain.

Egg Drinks

It will pay the druggist to push egg drinks. If he cannot afford to hire an experienced man who understands the art of mixing, one of the modern electric mixers will help him out. A bowl of nice clean eggs on the counter or back bar look well and help to develop this line. Perhaps the three best selling egg drinks are egg phosphate, egg chocolate and egg and milk.

Milk Drinks

The druggist should have milk on hand even if he sells very little of it. In some sections there is more demand for milk drinks than in others, but a demand can be created by a little judicious advertising, and this demand is one that he will find it a pleasure to fill. At the start he can purchase his milk in quart bottles and in this way not be forced to carry any more than he can sell from day to day.

Malted Milk

Malted milk has come to be considered a standard fountain beverage and is prepared in many ways, and it should be on hand when a fountain is opened. It does not spoil like many products and will keep until it is used, and for this reason it is a safe investment for the beginner and enables him to add many drinks to his menu.

Lemonades and Fancy Drinks

In hot weather—and for that matter even when it is not hot—there is a demand for cold, refreshing drinks, and for their preparation the druggist should have on hand lemons, which can be purchased a few at a time; lime juice, grape juice, bottled ginger ale (if he does not have it on draught), and fruit for decorative purposes. This class of drinks should be pushed because they yield the largest profit.

A Word About Advertising

In closing this series on making the start it will be well to say just a word about pushing the soda fountain sales. The druggist who has a fair location will find his fountain and his service the best advertisement he can have, but he will need to supplement this advertisement with a little direct talk with the prospective customers. The judicious use of signs and window strips will prove the most effective means for him to use. At the same time an opening day, with a little general publicity of some kind, will be a great help in starting the business. In advertising he should aim to get into the home. The circulars or announcements must be neat and attractive. Cheap dodgers should be avoided, and all he does have must be good. If centrally located he will find a little newspaper space of value in announcing his opening day. Let him tell the people of the start, give them good drinks and good service, and they will keep coming. Remember, it is not how many things you serve, but how well you serve them that counts.

Money yields no joy if it is sought and held because it is money. It is a tool, meant to be used in service to mankind and has been so regarded ever since men began to exchange one service for another. Isn't it common sense, then, if money is only a tool, that pleasure should be sought in its workings?

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SERVING PEACHES AT THE SODA FOUNTAIN

August the Month of Peaches—The Most Luscious of Fruits Neglected at the Soda Fountain

IN August peaches are most plentiful and cheap and are then in their most delicious ripeness and lusciousness. For some reason peaches have been neglected at the soda fountain, either through lack of interest or because of the difficulty of preparing preserved products or syrups that truly represent the fruit, but of all the fruits served at the fountain only one, the pineapple, excels the peach in the lusciousness of flavor and the possibilities of combination. Fresh peaches being about the last of the season's fresh fruits capable of being prepared for fountain service are all the more liked, and as they come into the market late in the fall they can be made the basis of many dainties and novelties. Peaches are specially delicious when served with cream, ice cream and whipped cream, and as the basis of fresh fruit sundaes and parfaits. They can be prepared in an endless number of ways, and the following recipes are given as suggesting a few only of the many ways in which peaches can be served.

Sliced Fresh Peaches

Select ripe yellow peaches, the soft, mellow kind preferably. Peel only as many peaches as will be served in one day, remove the pits and cut into thin slices. Cover the bottom of a glass bowl with slices of peaches, then sprinkle on a layer of sugar, then another layer of peaches and a layer of sugar until the bowl is full. Set aside on ice for an hour or so, and then stir up lightly so as not to break up the slices too much until all the sugar is dissolved. This makes a rich basis for sundaes, parfaits, etc., or for serving with whipped cream.

FRESH PEACH SUNDAE.
FRESH PEACH SODA
PEACHES & CREAM
CAN YOU THINK OF ANYTHING NICER THAN MELLOW PEACHES?
TRY OUR PEACH ICE CREAM.
(Ice)

SUGGESTION FOR PEACH WINDOW.

Crushed Peaches

Peel and pit as many peaches as will be needed, then run through a meat chopper, adding an equal weight of sugar. So prepared peaches will keep well and this form makes the best basis for peach ice cream, peach sherbet or peach mousse, the cream or sherbet being free from frozen lumps, which often occurs if the peaches are added merely cut up into small pieces.

Concentrated Peach Syrup

Peach syrup is one of the most difficult to prepare so that it will retain the full flavor of the fruit. The following process will give a full flavored syrup that can be diluted for use as required. Take equal weights of fruit and sugar, remove the pits but do not peel, as much of the flavor lies in the portion next to the skin, then grind up in a meat chopper as fine as possible and pack away in a stone or earthenware vessel that has a faucet in the bottom for drawing off the syrup. Split some of the peach seeds and remove the kernels, allowing one kernel to every pound of peaches; pound these up to a paste in a mortar and add to the ground peaches in the crock. Stir the mass well with a wooden paddle until the sugar is dissolved and let stand a few hours, then draw off as much of the concentrated syrup as possible from the bottom through the faucet. Put the residue in a strong filter cloth and press out as much of the remaining syrup as possible, adding a little thin syrup to the mass, if desired, to increase the yield. The resulting syrup will not be perfectly clear, but this is unavoidable, as it is practically impossible to get a perfectly clear peach syrup that has a rich, full flavor. The mellower and richer flavored the peaches, the finer will be the syrup.

Fresh Peach Sundae

Put a ten to the quart cone of ice cream in a sundae glass, arrange slices of fresh peaches around the sides, pour over this a ladleful of crushed peaches, top with whipped cream.

Peach Frappe

Carefully peel large select peaches and remove the seeds, hollowing out the center so that it will hold a small ladleful of ice cream, and put them on ice until thoroughly chilled. To serve, place the cored peach on a shallow dish, fill the centre with ice cream or water ice, pour over it a ladleful of peach syrup, top with whipped cream and sprinkle with vanilla sugar.

Peaches and Cream

Cover the bottom of a shallow-sundae glass with thinly sliced peaches, add an eight to the quart cone of ice cream and pour over this a ladleful of whipped cream and sprinkle a few bits of chopped maraschino cherry on top.

Peach Parfait

Fill a parfait glass half full of ice cream, one quarter full of crushed peaches and one quarter full of whipped cream. Beat up as usual until thoroughly mixed and frothy. Finish by topping the glass with marshmallow cream and sprinkle a few chopped nuts on the sides. Top with a slice of fresh peach.

Peach Shortcake

Line a sundae cup with Nabisco wafers or lady fingers, on top of these put an eight to the quart cone of peach ice cream and pour over enough crushed peaches to fill around the cone. Top with whipped or marshmallow cream and a maraschino cherry.

It's a Peach

Draw 1 ounce of fresh peach syrup into a 12 ounce glass, add half an ounce crushed peaches and some finely cracked ice, a slice or two of fresh lemon, and fill up with ginger ale and add a sprig of fresh mint at one side.

Peaches and Egg

Break a fresh egg into a shaker and add 1½ ounces of crushed fresh peaches and a No. 12 cone of ice cream. Shake thoroughly until well mixed and then fill up glass with fine stream soda and strain into serving glass. Top with a large spoonful of whipped cream and grate a little nutmeg on top. This is delicious.

Ginger Peaches

Put a No. 8 cone of peach ice cream into a soda glass and draw 1 ounce of ginger syrup, fill up with plain soda and stir up with fine stream. A couple of shakes of powdered cinnamon or nutmeg may be added.

Frozen Peaches

Sweeten to taste a quart of fresh cream and stir in thoroughly a cupful of crushed fresh peaches. Put this in a mold and freeze with a mixture of salt and ice until solid enough to cut in slices, which will take about two hours if plenty of ice is used. To serve, line the bottom of a shallow dish with Nabisco wafers or some sweet cake, cut a thick slice of the frozen cream and lay this on top of the cake, add a few slices of fresh peaches and pour over a ladleful of whipped cream. Or, instead of whipped cream, pour on top a ladleful of crushed peaches and a spoonful of pineapple syrup.

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THE CAUSE AND PREVENTION OF SODA WATER TANK EXPLOSIONS[1]

BECOMING greatly interested over an apparently increasing number of reports in the pharmaceutical journals and daily press of the explosions of carbonated water tanks, which in most cases resulted in horrible deaths or mortal injury to the persons handling them or in proximity to the destructive agents, the author, impelled solely by humane motives, determined to investigate the cause of these deplorable accidents and if possible find efficient remedies for their prevention.

Correspondence was entered into with six of the largest and best known manufacturers of soda water apparatus in the country to each of whom the following questions were submitted:

1. What are the best materials to use for constructing carbonated water tanks?
2. State the average number of years for which such tanks are serviceable?
3. How often should the tanks be returned to the manufacturers for inspection and repairs?
4. Mention the various causes for tanks exploding?
5. What precautions can be taken to prevent these explosions?
6. Give any other information pertinent to the subject.

Only four of the replies are quoted from, as they contain all the information possible on the subject, as follows:

A's Letter

A soda tank of our riveted No. 1 pattern with proper usage is good for twenty to twenty-five years. It is never necessary to reline the tanks except in case of leakage. A tank made without rivets should be inspected at least once a year as such a tank depends for its safety entirely upon the solder in the seams and the banging around to which it is subjected, being portable, is apt to loosen the seams.

The principal causes of explosions of tanks are: (a) Rough handling; (b) rust eating through the steel outer shell from being set in damp places and not being well painted, and (c) too great pressure, due to the use of a defective gauge while running in the gas.

A tank made with all seams riveted (as our model No. 1) is practically without the danger of explosion as the rubber hose used in running the gas would burst or blow off the attachments long before sufficient pressure could be run into the tank to explode it. This tank is constructed of heavy sheet steel and lined with block tin; the lining being entirely separated from the steel and not attached or affixed to it in any way—in other words, they are practically double tanks—a tank of sheet block tin inside of a tank of steel.

They are not subjected to rust inside, as the steel joints are not water tight and if a leak appears in the lining, it is immediately apparent by the water escaping through the steel shell. No tank ever made or constructed by this house, in its thirty-eight years business experience, has ever exploded.

B's Letter

1. The best materials for constructing soda water tanks are steel, especially made for the purpose and of sufficient strength together with pure sheet block tin lining of sufficient thickness. Many manufacturers have tried to meet the demand for soda water tanks the value of which to the buyer is measured by price only, he losing sight entirely of quality. In consequence the quality and quantity of steel in the tanks have by some manufacturers been materially reduced. The weight has been reduced fifty percent. and the block tin lining has been reduced as much as twenty percent. or more in order to produce a tank at a price which the buyer wishes to pay.

2. It is not possible to state the average number of years for which a fountain is serviceable. This depends entirely upon the class of service and the care given the tank. Where the manufacturer of soda water supplies the liquid in tanks to the various customers, these tanks receive more or less rough handling which reduces the length of service. Also the character of the place where the tank is used has an important bearing on its length of service. A damp cellar will rust out a steel tank rapidly. We have seen the steel in tanks that by reason of openings in the block tin lining, rust from the inside. In dry cellars the chances of rust from the outside are very slight. Most dispensers now make their own soda water and therefore the tanks used on the carbonators, not being subjected to rough handling, will last much longer, but these also are affected by the places where they are kept.

3. Whenever a tank shows signs of weakening, rusting or leaking, it should be returned to the manufacturer for testing or repairing.

4. In addition to the matter of cost of manufacture mentioned in the first answer, there is a mechanical reason for tanks exploding. Sometimes the solder used in the lap joint does not "take" when "sweated" in by reason of the parts being insufficiently heated when "sweated" in, the tank therefore being weakened. There are other reasons why tanks explode. There are tanks which are charged at low temperature and then placed where they are subjected to very much higher temperature, thus bringing about an expansion of gas beyond the capacity of the materials of the tank to withstand the pressure thus generated. We have known of tanks charged at low temperature being placed on wagons and exposed to the direct rays of the sun, which on a very hot day will often be considerably above 100 degrees Fahrenheit. We have also known of tanks being placed near radiators and stoves bringing about expansion in this way.

5. The most effective precautions to be taken against explosions are to buy tanks from reputable manufacturers of standing and to pay a price that will enable them to furnish a well made article of first class material sufficiently heavy for the purpose.

C's Letter

The best materials for constructing soda water tanks are unquestionably drawn steel of heavy gauge to insure strength and a heavy block tin lining to insure purity. The principal causes for tanks exploding are weak materials, imperfect soldering or concussion. Avoid dropping tanks or transferring them from low to high temperature when heavily charged, or better still, use a tank that will withstand any sudden increase of pressure which will be brought about by any of the conditions named.

D's Letter

1. We believe the best material for constructing soda water tanks is a good grade of steel lined with pure block tin and tested to 500 pounds pressure.

2. The average number of years for which these tanks are serviceable varies. Our opinion is that with proper care they should stand for five years.

3. They should be returned to the manufacturer for inspection and tests at least every three years.

4. The cause of tanks exploding is excessive pressure and filling too full, so that there is not left sufficient capacity to take care of the expansion of the gas as in warm or hot weather.

5. To prevent explosion, the tank should be examined carefully to see that there are no rust spots in the shell, handling carefully and not exposing to the sun.

6. If the owner will see that his tanks are kept painted so that they will not rust, and see that they are not thrown from the wagons to the ground as is frequently done so as not to damage them, and will not put more than the allotted amount of water in the tank, he will reduce explosions to a minimum.

Summary

These statements all show that the causes of the explosions are few and easily understood; therefore it is evident that with the same sound judgment used in working with the tanks, as the average pharmacist displays daily in his prescription department these distressing accidents can be almost entirely prevented.

New tanks of the best grade can be purchased at prices ranging from $25 to $30 each. It is folly to imperil human lives and property in order to save a few paltry dollars in the purchase of these articles by making a low price the first consideration, thus tempting manufacturers to cheapen the construction of their products to meet the demands of mercenary buyers.

In the hope that this paper may be the means of saving one or more of his fellow pharmacists from mortal injury or a violent death, the author finds ample compensation for the work of its preparation.

[1] Read at the thirty-fifth annual meeting of the Pennsylvania Pharmaceutical Association, June 19, 1912.

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FRESH BLACKBERRIES AT THE SODA COUNTER

A Neglected but Valuable Fruit—How to Preserve and Serve It

BLACKBERRIES are a fruit not as often used at the soda fountain as its flavor and beautiful color deserves, the chief objection to its use being its large, hard seeds. If the seeds are removed from the crushed or preserved fruit delicious crushed fruit sundaes and other novelties can be made from it. To avoid crushing the berries more than possible a coarse sieve should be used, as the seeds of the blackberry are quite large and can easily be strained out.

CRUSHED BLACKBERRIES.

Select fresh well flavored berries, crush to a pulp and let this stand until slight fermentation has begun. Strain through a sieve just fine enough to remove the seeds, add sugar to saturation and bring to a boil quickly: Put in jars while still hot. Or, the crushed fruit can be placed in jars (first) sterilized with boiling water, the jars put into a pan of cold water and the fruit sterilized by bringing the water to a boil and continuing the heat until a thermometer placed in the fruit indicates a temperature of at least 200 degrees Fahrenheit. This latter method brings out the flavor better.

BLACKBERRY ICE CREAM SODA.

Place a small cone of vanilla soda in a soda glass, pour on a ladleful of crushed blackberries, mix with the fine stream and fill up with plain soda. Top off with a sprinkle of grated cocoanut.

BLACKBERRY SUNDAE.

Place a number 8 cone of vanilla or bisque ice cream in a sundae dish, put a row of fresh, large blackberries around the bottom of the cone, pour over this a ladleful of crushed blackberries and top off with whipped or marshallow cream and add a maraschino cherry.

BLACK AND WHITE.

Put a number 8 cone of lemon ice cream in a sundae dish, sprinkle the cone with fresh blackberries, pour over this a ladleful of crushed blackberries, top off with marshmallow cream and sprinkle a few blackberries on top.

ROUGE ET NOIR.

Select a rather flat dish, then at one end put a small cone of fresh raspberries and at the other end a cone of fresh blackberries and pour a ladleful of crushed fruit over each pile of berries, using raspberry for the fresh raspberries and blackberry for the blackberries. Between the two piles place a small cone of orange water ice or vanilla ice cream and cover the whole with maraschino whipped cream tinted green. A fresh berry should be placed on top of each pile and a maraschino cherry on top of the ice cream in the center. This gives a suggestion of the red and black of the roulette table and has a spice of naughtiness about the name. Should sell at 15 cents.

BLACKBERRY PARFAIT.

Into a parfait glass place a layer of vanilla ice cream, then a layer of fresh blackberries and pour over the berries enough crushed fruit to cover them, then flatten a small cone on bisque or pistachio cream on top of the berries and top off with marshmallow cream.

TUTTI FRUTTI SURPRISE.

Into a tall parfait glass place a layer of strawberry ice cream, pour on top a small ladleful of crushed strawberries, then a layer of vanilla ice cream and a layer of crushed blackberries, then a layer of raspberry ice cream and a layer of crushed raspberries, lastly a layer of orange water ice and a topping of whipped cream.

SOMETHING BERRY NICE.

Place a number 8 cone of vanilla ice cream in the center of a flat dish, then arrange little piles of fresh strawberries, raspberries and blackberries around the sides of the cone, pour over this a ladleful of a mixture of strawberry and raspberry syrup and top off with whipped cream. This makes a delicious dish if properly served with fine ripe berries and should bring 15 cents. Pineapple syrup may be used as a variation instead of strawberry or raspberry syrup.

WINDOW DISPLAY AN INDEX OF THE CHARACTER OF THE STORE

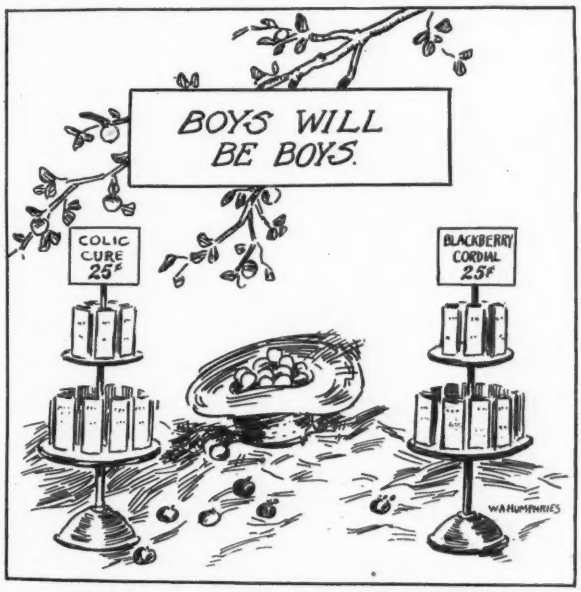
By W. A. Humphries.

WHEN you buy an apple at the fruit stand it is human nature to pick out the most perfect one you can find. You assume that if the skin is perfect the apple is sound.. You have judged the piece of fruit solely from its external appearance.

The stranger who passes a store forms his opinion of what the interior may look like from the exterior appearance. What the skin is to the apple the show window is to the store. If there is a worm-hole on the surface of the apple one might naturally expect to find a worm at the core. If the window display is fly-specked, dirty and carelessly arranged one is led to believe that he will find the interior of the store in the same condition.

There is no good excuse why a druggist's window should not be neat, clean and attractively—if not artistically arranged.

Lack of competition in the matter of window displays sometimes causes a merchant to ease down in his efforts of producing a good window display. There is no apparent reason why this should be so. The less competition one has in window trimming the harder one should work to produce effective displays. The contrast between your display and that of the other fellow will be the greater and will reflect the progressiveness and general character of your store to the detriment of your competitor.



GREEN APPLE TIME: A COLIC CURE WINDOW.

The display shown here is intended to help in the sales of colic cure, etc., which are most in demand in the summer and autumn. For the background use a branch or two of green apples. An old straw hat with frayed edges and filled to overflowing with green apples forms the center of the display, while the remedies may be grouped in the front of the window where the names can be easily read.

The druggist in the country, where passers-by are less frequent is likely to be lax in his window trims because his window-produced sales are not as apparent as those of his city brother. The sales from window displays in the city are for the most part direct sales. In the country while the direct sales from the window are of necessity fewer than in the city, the indirect sales are no doubt as great or greater than those in the larger town.

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The British Pharmaceutical Conference

Edinburgh, July 29 to August 1

THIS year the annual gathering of British pharmacists was held from July 29 to August 1, in the capital of Scotland, historic and romantic Edinburgh. Every globe trotter, American or other, knows Edinburgh, and not only its picturesqueness as a city, but also its associations, historic, literary, and scientific, make it an ideal spot for any gathering. Additional interest attached to the conference this year from the fact that Sir Edward Evans, one of the heads of the world known firm of Evans Sons, Lescher & Webb, Limited, of London, Liverpool, New York, Montreal. and other places, was the president. Sir Edward Evans (whose portrait we give) was but recently entertained by the New York Board of Trade. He is more than the head of a house manufacturing chemists' requisites with ramifications in all parts of the globe. He has been an able politician, and in England the term politician is an honorable one, for many years, and his knighthood was a recognition by the present Government of his services to the Liberal party.

SIR EDWARD EVANS,
Liverpool, President of the British Pharmaceutical Conference.

As for Edinburgh itself, with its natural attractions, little need be said. Many AMERICAN DRUGGIST readers doubtless know it, and the pictures of spots visited by the conference will recall pleasant memories familiar to all readers of Scott's works.

THE PROCEEDINGS AND THE PAPERS

THE proceedings opened on the evening of Monday, July 29, with a reception in the City Chambers by the Lord Provost and municipal dignitaries of the city of Edinburgh. The opening session began on Tuesday morning, July 30, and continued until 3.30 p. m., after which a garden party was given by Mr. and Mrs. David Brown at Piershill. Mr. Brown is head of the well known makers of alkaloids and fine chemicals, J. F. Macfarlan & Co., Ltd., of Edinburgh and London. There was an "At Home" in the evening, with concerts and a dance. The sessions were resumed on the following morning, concluding about 3 p. m. in time to catch train for the visit to Dunfermline. On the Thursday the Land of Scott was visited. The party went by train to Melrose, then drove from Melrose to Dryburgh and back again to Melrose by another route, taking in Sir Walter Scott's favorite view from Bemersyde Hill. The following is a complete list of the papers submitted:

The Papers

The Botanical Source of Japanese Aconite, by E. M. Holmes, F.L.S.
The Botanical Source of Japanese Chillies, by E. M. Holmes.
Commercial Esters Used in Perfumery and for Flavoring Purposes, by John C. Umney, F.C.S., and C. T. Bennett, B.Sc.
The Estimation of Relative Tryptic Activity, by A. R. Smith, M.Sc.
Further Data in Regard to Asafetida, by E. F. Harrison, B.Sc., and P. A. W. Self, B.Sc.
Note on the Oils of Ammoniacum, Galbanum, and Elemi, by E. F. Harrison and P. A. W. Self.
Concentrated Tinctures, by J. Haycock.
Note on the Determination of Lead in Chemicals, by G. D. Elsdon, B.Sc.
Note on the Determination of Brucine in Strychnine, by D. B. Dott, F.I.C.
The Iodine Content of Thyroid Gland, by N. H. Martin, F.R.S.E.
The Formaldehyde Solution and Tablets of Commerce, by C. H. Hampshire, B.Sc., and Stephen Furnival, Ph.C.
An Oil from an East Indian Bark, by E. W. Mann, B.Sc.
The Solubility of Ether in Normal Saline Solution, by R. R. Bennett, B.Sc.
Unrecorded Microscopical Characters in Bael Fruit, by J. C. Shenstone, F.L.S.
The Evaluation of Potassa Sulphurata, by David Lloyd Howard and J. B. P. Harrison, F.I.C.
The Potency and Keeping Properties of Some Galenicals as Determined by Physiological Tests, by Alexander Goodall, M.D.
Bacterial Vaccines and Their Preparations, by Ian Struthers Stewart, M.D.
Note on the Determination of Nitrates in Commercial Bismuth Oxycarbonate, by Walter R. Pratt, A.I.C.
Further Data on the Standardization of Digitalis, by Gordon Sharp, M.D., and F. W. Branson, F.I.C.
Note on the Calcium Lactate, by Charles A. Hill, B.Sc.
The Suitability of Commercial Protein for Pharmaceutical Use, by F. W. Crossley-Holland, F.C.S.
Suggestions for the More Extended Cultivation of Drugs, by J. H. E. Evans.
A Few Notes, by Thomas Tyrer, F.I.C., and F. C. Gosling.
Laboratory Notes, by Horace Finnemore, B.Sc., and Dorothy M. Braithwaite, Ph.C.
Observations on the Chemical Detection of Blood, especially in Bloodstains, by Professor Edward Schür, M.D.

The New Officers of the Conference

The following officers were elected for 1912-1913:

President—John C. Umney, F. C. S., London.

Vice-Presidents—C. B. Allen, president of the Pharmaceutical Society of Great Britain, London; Sir William Baxter, Ireland; J. P. Gilmour, chairman of the executive committee of the North British Branch of the Pharmaceutical Society, Glasgow; Edmund White, B. Sc., F. K. (F. I. C.); Prof. Henry G. Greenish, F. J. C., F. L. S., London, and E. Saville Peck, M. A., Cambridge.

Honorary General Secretaries—Horace Finnemore, B. Sc. (London), F. I. C., pharmaceutist to Guy's Hospital, London, and Reginald R. Bennett, B. Sc. (London), F. I. C., pharmaceutist to Charing Cross Hospital, London.

Honorary Local Secretary—W. J. Uglow Woodcock, organizing secretary to the Pharmaceutical Society of Great Britain.

THE NEW PRESIDENT

The most conspicuous man in British pharmacy of the present day is, by general consent, John C. Umney, who has just been elected president of the British Pharmaceutical Conference. The insistent feature in Mr. Umney's personality is his versatility. He is as much at home at a smoking concert of chemists' assistants as in describing the chemical constituents of an essence of jargonelle pear or in leading a public discussion on the ethics of retailing baby soothers. This is mainly due to a thorough pharmaceutical and commercial training and to a natural taste for science, the whole being dominated by a temperament of unrufflable (if we may be allowed to coin a word) urbanity.

John Umney, or "J. C.," as he is familiarly described in the

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THE EDINBURGH MEETING OF THE BRITISH PHARMACEUTICAL CONFERENCE.

Prince's Gardens and Street and Scott Monument.
University Union, where the meetings were held, and McEwan Hall.

The Royal Infirmary.

Edinburgh Castle.
University New Buildings.

drug trade, is the second son of Charles Umney, the man whose ability is mainly responsible for making the firm of Wright, Layman & Umney known the world over. John was educated at Dulwich College, and his business career began as an apprentice in the pharmacy of the late William Martindale. He went through the regular routine of a retail and dispensing business, but there can be no doubt the Martindale training left its mark on young Umney. From Martindale's he went to Leipsig, where he was for a time in the laboratories of Schimmel & Co., and there, also, a deep imprint was left, for John C. Umney is today an authority on essential oils. His German experience over, he returned to London and went to the School of Pharmacy at Bloomsbury Square, where (like his father before him) he won the silver medal in practical chemistry and distinguished himself generally as a brilliant student. While still quite a young man he demonstrated his latent capacity for public affairs by acting as secretary and president of the London Chemists' Assistants' Association.

After graduating from Bloomsbury Square with the major qualification, John C. was taken into the business of Wright, Layman & Umney and he has never looked back. His scientific papers and practical work have been regular, persistent and useful. He has been an ardent conferencer and has filled the position of treasurer for many years. The public offices he holds now are many and various. As a matter of fact, if there is any public function or gathering of exceptional interest to pharmacists or the drug trade, John C. Umney is sure to be there, and more often than not, in the chair. He is chairman of the Chemical Section of the London Chamber of Commerce, managing director of Wright, Layman & Umney, Ltd., past president of the Drug Club, and good fellow generally. During recent years he has specialized in essential oils, and in the commercial exploitation of the company's specialty, "Wright's Coal Tar Soap." So successful has he been that "Wright's" is now a household word in the nursery all over the British Empire and in most foreign countries, while "Umney on Essential Oils" is looked upon as a thing to be expected. One of his most recent ventures in this connection is the editing of a monthly journal, The Perfumery and Essential Oil Record, a bright little journal which he established only a year or two ago. Needless to say, the Conference could scarcely have made a more popular choice for their next year's president in London than John C. Umney.

The Presidential Address

By Sir Edward Evans.

After touching lightly upon the personal considerations which led him to accede to the request of the committee to accept the presidency for this year, Sir Edward dealt first of all with the "Cultivation of Medicinal Plants." That he saw much of moment in this connection in America is evident from his remarks which were as follows:

Drug Culture in the United States.

I may say, however, that having just returned from a visit to the United States and Canada, I have been very much struck, in making some inquiries, by the fact that the government of the United States, in addition to being very particular as to the purity of all drugs sold in that country, have a bureau of Plant Industry in connection with the United States Department of Agriculture. They issue bulletins from time to time, and I have here on the table four such bulletins—one on The Wild Medicinal Plants of the U. S. A.; one on American Root-drugs; another, American Medicinal Barks; and another, The Seeds and Plants Imported into the U. S. A. I believe it is this department, with its investigations, that has contributed in recent years so largely to the use of barks, drugs, roots, etc., of American origin and which thus have somewhat replaced the older drugs so familiar to us in our early days. It will please the ladies present to know that these bulletins were all drawn out by a lady—namely, Miss Alice Henkel. It may be interesting for me to read an extract from a letter I received from Mr. True, the physiologist in charge at Washington of this department:

"In regard to natural fluctuations in active principles between wild and cultivated plants, etc., information is meagre and not altogether consistent. In connection with the work of the department, we are finding no reason to believe that cultivation in general diminishes the active principle in the alkaloid-bearing plants examined. This is probably also true of digitalis. There is probably as much spontaneous variation in chemical properties as in form and size among plants, as we are finding out from study of alkaloid-bearing plants, volatile-oil plants, and others. The soil characteristics, we believe, in some cases, are influential in determining the amount of active principle present, and perhaps in other cases the latitude is even more important, probably due to the great amount of heat demanded. In general, volatile-oil formation is aided by clear, dry weather, and hindered by rain. The matter of care in harvesting and curing is important, we believe, especially in digitalis, and others in which the enzymes are apt to play an important rôle. Digitalis should be carefully harvested, promptly and *very thoroughly cured*. It is, we believe, desirable to store in light-tight containers in a cool place, after being finely powdered. For the production of good digtalis it seems probable that artificial heat is likely to be very useful. It is almost necessary in some parts of the country to cure bulky products like red peppers, some roots, etc., if moulding is to be avoided. The inquiries in your letter under this number involve a good many considerations, which to discuss fully would carry this reply beyond practicable limits.

"The displacing of natural old-fashioned drugs by synthetic preparations is a matter on which my opinion is not very valuable. That such a displacement is going on to a certain extent I believe is true, but we see no reason to anticipate any marked effect within the near future. In other words, we are conducting our drug-growing work on the supposition that it will continue to serve the country for many years. Should it be possible to synthesize active principles now derived from expensive drugs, such as golden seal, and at a low enough cost, doubtless the demand for the drug would suffer. I realize that this reply is rather general, but the information available is not specific."

I bring this matter before you as possibly this Conference may think it worthy of consideration that our own government might form in the Board of Agriculture a department such as exists in the United States to further the growth in this country of herbs, roots, etc., and which the small holdings or allotments might be the channels of carrying into effect. I would like to point out that the soil of this country seems adaptable for this purpose, as what it does produce is superior to any produced elsewhere; for instance, digitalis, henbane, colchicum, valerian, and belladonna, to say nothing of peppermint, lavender, and other aromatic herbs. Although the various matters will be fully alluded to in the paper that is to be read on the subject, I will simply in a cursory manner notice what will naturally occur to most of you—that what apparently may seem a small trade or industry, if carefully attended to, in the aggregate comes to be one of considerable value; for instance, cascara sagrada.

It is estimated that the crop of this valuable bark now reaches about a thousand tons annually. It is, as you are aware, collected almost entirely in the forests of northern California, Oregon, and part of British Columbia, being obtained from a scrub bush, and some 100,000 or more trees are destroyed annually for the production. The consumption is now almost ahead of the supply; the price, of course, fluctuates according to the state of the labor market and the distance from the shipping ports that they collect the bark.

Another important industry from the United States is wahoo-bark, from which euonymin is made; and still more important, mandrake-root for the purpose of making podophyllin. Then there is hydrastic canadensis, the sale of which is so largely on the increase, though not much used in this country and it has been at such an extraordinarily high price that they are now adopting a process of cultivation. Also ginseng, which is, however, not used in this country, but entirely in China. I could go through a long list of well known barks, roots, plants, etc., such as bayberry, hamamelis, slippery elm, sassafras, senega, serpentaria, and burdock, the conditions of which are all on similar lines. As civilization is covering the country the destruction goes on, and as labor prices rise so must cost; and, of course, the problem that faces dealers, such as the company with which I am connected, is to find out when and where to purchase, and the probabilities of the crop, etc., and investigate quality, etc.

Sophistication of Drugs.

Before leaving this subject I may state the care which is necessary owing to the tendency of many Eastern countries, and even others, to sophistication. For instance, the carelessness in the collection of drugs as evidenced in long buchu leaves, where leaves of *Barosma serratifolia* are often found mixed with another species which may be distinguished by not having the serrated margin. We have also been troubled during the last eight months with imports of buchu from South Africa. A certain amount of stalk, caused by careless collection, can be understood, but when the stalks are collected separately, put into a chaff-cutter, and all reduced to a similar length thereby, then added to the leaves, it becomes quite unpardonable.

Asafetida, arriving from Persia, apparently to the eye of very fine "drop" quality, has been found to be small stones very carefully covered with asafetida and allowed to dry. A similar sophistication has appeared in the case of myrrh, small stones being covered with myrrh while in a moist state, then dried, making detection with the eye extremely difficult. Copaiba from South America has also been found adulterated with African balsam.

The cultivation of drugs, at one time peculiar to one country, has now extended to another by cultivation, and this is particularly noticed in ipecacuanha, where the cultivation has been extended from Brazil to the State of Selangor, on the west coast of the Malay Peninsula. This is commonly known as "Johore" ipecacuanha, whereas, strangely enough, it was not quite successful when cultivated in Johore. The root from the original Rio kind is now cultivated in the Province of Minas, in Brazil, with great success.

It is an interesting fact that the spread of civilization in Canada is tending to exterminate the beaver. The result is, of course, that castoreum is becoming exceedingly scarce, and the price has become abnormally high.

An instance where artificial treatment does not always take the place of the natural is that of rhubarb, which is often dried entirely in a kiln, or partially so dried. The quality is thus much deteriorated by the process, but the market price is not much more than half of that of the root which is sun-dried, and yet to the eye in appearance there is little difference.

On that point he said:

Though, of course, not able to discuss this entirely from the point of the retail pharmacist, I claim, from my constant personal intercourse with them for forty-five years, to have some knowledge of the difficulties, etc., which surround the trade.

My connection has been, as I stated before, coincident with the passing of the pharmacy bill, and I am certain of this, that the status and position of the pharmacist are better than they were; but still greater have the public benefited. I maintain, however, that the government should have given more protection than it did, as it is in the interests of the community as a whole that there should be within easy reach of all a qualified pharmacist giving individual attention to the business. But it may be said—and rightly so—"the pharmacist must live"; and, in view of the fact of large stores and companies trading in drugs, and doctors dispensing their own medicines, that it is difficult to make a living out of the "ideal," and that the time is coming when the pharmacist will disappear. I do not believe it; for I consider the greatest factor for stability in all business is the individuality of the man who carries it on, and in no business is this so true as that of the pharmacist. Impress your own personality in your business, and especially with your customers, and no competition in the world will take it away. It is a goodwill that cannot be taken away—the

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most valuable asset of any business. I am, I confess, somewhat of an optimist, but I believe that personal energy thrown into every phase of life goes a long way to success. I believe there is still room in this country for the individual pharmacist who with the necessary knowledge of the science of his business, as rightly insisted upon by the state, will also adopt commercial principles and bring his own personality to bear upon all those with whom he is in contact, whether employee or customer; and I confess I have always found in my long business career that the man easiest to do business with is the man who knows his business best. God forbid that in this country our pharmacies should descend to what I have seen across the Pond, where all the familiar bottles connected with pharmacy are put out of sight, and when you enter the shop you find everything but pharmacy apparently carried on—soda fountains, chocolate stalls, postcards, and in one a hosiery department, boots, shoes, etc.

I called in one drug store in a certain town in Canada, which I was told was carried on by a Scotchman. I was surprised to be at once recognized, and on entering into conversation with him found he was a Major man and had held high positions in Scotland and England, and he said:

"Here I feel all my education has been wasted. The thing I care for least is when a customer brings in a prescription, because it takes time, and I do not get paid sufficient for the time occupied when I could be busy selling goods all ready packed, many of which I put up myself for 15 to 25 cents and sell at a dollar, and I am doing well."

I maintain that this is not good for the community, and I trust that the public and the medical profession will realize that for their own protection the retail pharmacist—bringing knowledge and skill and his own personality to bear upon the professional part of the business—is an absolute necessity, and will not be unwilling, as for all good services rendered, to pay fair remuneration.

In closing, Sir Edward referred briefly to the National Insurance act, deprecating the rupture of the negotiations between the medical men and the government, and also spoke of the investigation of the patent medicine evil by the government, which he hoped would have a helpful outcome.

SOME OF THE PAPERS

J. C. Shenstone gave a paper on some unrecorded microscopical characters of Ball-fruit, which was mainly of but academic interest. He attaches importance to the examination of the starch grains in the tissues of the fruit, which he found to be characteristic.

KEEPING QUALITIES OF DIGITALIS, STROPHANTHUS AND SQUILL PREPARATIONS.

Dr. Alexander Goodall detailed some investigations he had made in the Physiological Laboratory of Surgeons' Hall, Edinburgh, on the potency and keeping properties of tincture of digitalis, tincture of strophanthus and tincture of squills, as determined by physiological tests. His experiments served to show that the digitalis tincture is not reliable when over one year old, strophanthus tincture retains full activity for three years and squill tincture for about two years. His researches pointed to real danger if tinctures of excessive potency are employed, and demonstrated conclusively that only recently prepared tinctures, which have been tested, should be dispensed.

Dr. Gordon Sharp, assisted by the well known Leeds pharmacist, F. W. Branson, made some further researches into the standardization of digitalis. The object of the work was primarily to ascertain if a tincture made with 90 percent. alcohol remained active longer than the ordinary pharmacopœial preparation. Other points were the relative activity of the petioles, and of tinctures prepared from leaves gathered at different times of the year. Ten samples were prepared and physiologically standardized. At the end of four months all came up to standard, though the stronger alcohol preparations were not quite so toxic as the others. It was also shown that leaves without petioles make a stronger tincture. At the end of twenty months seven out of nine were potent. After twenty-eight months only one of the seven responded to the test.

LAWANG OIL.

E. W. Mann, who is chemist to Southall Brothers & Barclay, Ltd., of Birmingham, has discovered an oil in Massoi bark, or "Lawang"—a species of *Cinnamonium litsea*—shipped from the Dutch East Indies. The oil is heavier than water and has an odor resembling a mixture of nutmeg, sassafras and clove. The oil is readily soluble in alcohol and fractional distillation revealed three fractions. A reaction for aldehyde was obtained, and on treating with metallic sodium an energetic reaction was set up, the reaction mixture on warming becoming semi-solid. This was extracted with ether and yielded a considerable amount of a brownish substance insoluble in ether, while the soluble portion rapidly turned a bright blue on exposure to air. The latter deposited eventually a blue precipitate, which on filtration and exposure to the air also turned brown. The portion insoluble in ether was readily soluble in water and acidification of the aqueous solution produced a white precipitate. This was extracted with ether and on cooling crystallized in rosettes. Further investigation will be made to endeavor to identify this crystalline acid.

SOLUBILITY OF ETHER IN NORMAL SALINE SOLUTION.

The solubility of ether in normal saline solution has been the subject of investigation by Reginald R. Bennett. The research was suggested by the use of ether dissolved in normal saline solution to produce anæsthesia by intravenous injection. The solubility of pure ethyl oxide, free from alcohol and water, is shown at various temperatures in the following table:

Temperature, Degrees Centigrade	Grammes of Ethyl Oxide dissolved by 100 grammes of Normal Saline	Cc. of Ethyl Oxide (at 15° C.) dissolved by 100 Cc. of Normal Saline
0°	13.08	18.27
5°	11.15	15.58
10°	9.45	13.20
15°	8.10	11.31
20°	6.87	9.60
25°	5.96	8.33
30°	5.30	7.40

The figures in the second table represent the average solubility of several samples of commercial purified ether prepared for anæsthetic purposes from methylated spirit. The samples had a specific gravity of 0.720 at 15° C., but all contained traces of water and the appreciable quantities of alcohol. The actual amount of alcohol present clearly must influence the solubility in water, and commercial ether will always be more soluble than the pure compound.

Temperature, Degrees Centigrade	Grammes of Ether dissolved by 100 grammes of Normal Saline	Cc. of Ether (at 15° C.) dissolved by 100 Cc. of Normal Saline
0°	13.46	18.80
5°	11.55	16.14
10°	9.87	13.79
15°	8.50	11.87
20°	7.38	10.31
25°	6.46	9.02
30°	5.83	8.14

BACTERIAL VACCINES.

The increasing importance of vaccines in medical treatment rendered the contribution on the preparation by Dr. Ian Struthers Stewart of more than ordinary interest. He said in part:

Bacterial vaccines have a field of usefulness much wider than that of other organic substances, and they bid fair to oust all other remedies in the treatment of diseases of bacterial origin. Two types of vaccines are used, autogenous and stock, the former being made from the organism causing the patient's disease, and the latter containing several strains of one bacterium cultivated from different sources. The balance of opinion seems to be in favor of the autogenous vaccine. It is usual in cases of extreme urgency to use an appropriate stock vaccine for the first inoculations, the minimum time for the preparation of an autogenous vaccine being from twenty-four to forty-eight hours. Stock vaccines of staphylococci are very satisfactory on the whole, though occasionally a case is met with where an autogenous vaccine is necessary. On the other hand, with *B. Coli* it is almost always necessary to prepare a fresh vaccine for each case. The first step toward the preparation of a vaccine is the collection of material from the patient. This may consist of blood, pus, sputum, urine, or fæces, but it must be collected with strict apsepsis. It is important that, whenever possible, the vaccine should be made from a primary virulent culture, and as in a general way an organism on sub-culture becomes less virulent, it is essential to keep as near to the primary culture as possible. Every care must be taken to make sure that the true cause of infection is found. In taking specimens sterile swabs are usually satisfactory, but where pus is contained in a cavity a sterile pipette is more reliable, as it is not possible to avoid contamination when a swab is used. For vaccine preparation the cultures should be used as young as possible, and if the material has been carefully collected, it will generally be found possible to use the

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primary culture for the vaccine, otherwise separation by plate cultures is necessary.

The bacterial emulsion is made from the culture by adding to each culture tube about ½ Cc. of sterile saline solution (0.9 percent.), so that the liquid flows over the surface of the medium and washes off the bacterial colonies. If this is not sufficient, the growth may be scraped off with a sterile platinum loop. The emulsion is then transferred by means of a sterile pipette to a sterile centrifuge tube, in which the different strains from various culture tubes may be mixed. The emulsion is then thoroughly centrifuged, in order to get rid of bacterial clumps and particles of culture medium. . . .

Vaccines are generally sent out in small glass capsules hermetically sealed, labelled with the number of organisms contained in 1 Cc. of the emulsion.

USEFUL NOTES.

A series of interesting, useful and thoroughly practical notes were contributed by Thomas Tyrer and F. C. Gosling. They were on the following lines:

COMMERCIAL FORMATES.

On being asked to supply sodium formate answering the requirements of the B. P. Codex, an examination of stock showed it to be in well defined prismatic crystals having 2 molecules of water of crystallization, instead of 1 as stated in that work. Earlier investigators (Gröbel, Souchard and Groll) appeared to have obtained the salt with 1 molecule of water, but the authors were unsuccessful in preparing a true crystallized salt containing only 1 molecule of water.

Samples of sodium formate obtained from different sources had the following composition:

	$NaCO_2H$	H_2O
(*a*)	64.0	36.0
(*b*)	95.5	4.5
(*c*)	100.0	Nil
(*d*)	95.8	3.2
(*e*)	98.8	1.2
(*f*) prepared by B.P.Codex method	66:8	33.2
One molecule of water requires	79.07	20.93

It is evident that the formula should be amended to that with 2 molecules of water.

Other formates were investigated with the following results:

Lithium Formate.—A well crystallized salt containing 1 molecule of water—$LiHCO_2H_2O$.

Calcium Formate.—The salt crystallizes without water of crystallization—$CaC_2H_2O_4$.

Potassium Formate.—The salt is without water of crystallization, but very deliquescent. As it is extremely difficult to carry the evaporation of the solution down sufficiently far to drive off all the water without decomposing the salt, a reasonable deviation from the theoretical 100 percent. may be expected. Commercial specimens were found to contain about 95 percent. of pure potassium formate—$KCHO_2$.

Ferric Formate—The B. P. Codex quotes the formula $Fe_2C_6H_8O_{12}$. The salt prepared after the Codex manner was found to contain 95.5 percent. of anhydrous salt and is without water of crystallization. It is soluble in water—$Fe_2(CO_2H)_6$.

Ferrous Formate—The formula given is that of the anhydrous salt, while the text states that it occurs in the form of short square green crystals. This salt was found to contain 2 molecules of water; it may be prepared by decomposing barium formate with ferrous sulphate, filtering, and crystallizing out with alcohol and addition of a little ether. It is very unstable, oxidizing with great readiness when in solution. The dry salt is but little affected by air—$Fe(CO_2H)_2{,}2H_2O$.

It is highly desirable that in works of reference the subject matter should be correct, even in details. Statements such as "the salt is not required to contain more than 100.79 percent. of pure ammonium bromide" might obviously be better expressed or left out altogether. In criticising the B. P. Codex monographs the authors state:

ETHER 0.735.

The compilers have neglected to take note of the solubility of ether in water in giving a test for excessive alcohol, the test being merely a copy of that of the B. P. The latter authority says that ether should lose only 10 percent.; but this is not the fact, as 15 percent. is lost owing to the solubility of ether in water—a point overlooked in both works. The solubility of (absolute) ether in water is given by Squibb as 1 in 11.1 volumes, and by Allen as 1 in 11 volumes.

PETROLEUM SPIRIT.

The specific gravities and boiling points are not consistent and not obtainable in practice. A petroleum spirit of specific gravity 0.640 has always a large fraction boiling below 40°, and a spirit at specific gravity 0.700 always contains a large amount distilling above 60° C.

POTASSIUM BINOXALATE.

Salts of sorrel as understood in the trade usually consists of potassium quadroxalate, but from the description of salts of sorrel it is to be presumed that some latitude is allowed in respect of this article.

IRON PERCHLORIDE SOLUTION.

It appears necessary, even at this late date, to draw attention to the fact that the specific gravity and iron content given for this preparation do not accord (cf. Tyrer and Levy, C. & D., 1900). In view of a revised pharmacopœia, it may not be unwise to express an opinion upon the limits for arsenic. Under existing technical conditions extremely narrow limits are neither necessary nor desirable. All things considered, the limits suggested by Dunstan and Robinson (48 parts per million) should be continued.

METHYL ALCOHOL.

The toxicity of this alcohol is now placed beyond doubt. Attempts to ascribe the toxic quality to other constituents of commercial methyl alcohol and wood naphtha have failed. Undoubtedly methyl alcohol is itself toxic, as well as some other constituents of the commercial product.

FROM JAPAN.

E. M. Holmes, the Bloomsbury Square materia medica expert, gave details of two Japanese products—Japanese aconite root and Japanese chillies. Mr. Holmes is always succinct and accurate in his contributions and with regard to the first he said:

The root sold in this country as Japanese aconite root is referred in most text books on materia medica to *Aconitum Fischeri*. Prof. E. Kinch, when resident in Japan, sent the author, soon after the introduction of the drug here, an entire plant of an aconite named *A. Fischeri*, but the root was too large and tapered too gradually for it to yield the Japanese root of commerce. Specimens of *A. Fischeri* in the British National Herbaria showed that considerable confusion exists with regard to this species. Japanese botanical works illustrate under this name species which obviously cannot be identical. There are evidently many species cultivated in Japan, some in the Southern Island of Hondo and some in the Northern Island of Yezo. These may be divided into two categories—viz., those with elongated conical roots not exceeding when dry ¾ in. in diameter, and others turbinate or broadly and shortly conical of 1 in. to 1¼ in. in diameter. The Japanese aconite roots imported into this country belong to the first category, those employed in Chinese and Japanese medicine being included in the second group. The original *A. Fischeri*, described and figured by Reichenbach, is a native of Kamschatka, and the Japanese *A. Fischeri* is evidently not the *A. Fischeri* of Reichenback, but it really requires careful revision as a species. It was thus evident that only from root characters would it be possible to identify the origin of the Japanese drug. The determination of the botanical source of the root is due to a hint by Mr. S. Okubo, of the Japanese Embassy, who pointed out that the Chinese characters accompanying the drawing in Dr. Langgaard's article on Japanese aconite roots (Archiv. der Pharm., XV, page 163) indicated a climbing plant. Of twining species of aconite two only are known in Japan—viz., "Hanadzuru," or *Aconitum uncinatum*,

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L., var. *japonicum*, Regel, and "Dsuru torikabuto," or *Aconitum volubile*. The roots of these species closely resemble the Japanese drug, and there is practically no doubt that the former produces the bulk of the root. The roots with a stellate meditullium found in Japanese aconite apparently belong either to the latter or to *A. Napellus*. Lantern slides of *A. uncinatum* var. *japonicum* were shown in comparison with others illustrating the plants given in Japanese works as *A. Fischeri*. Sections of the roots of *A. uncinatum* and *A. volubile*, obtained from Kew and Messrs. J. Veitch & Sons, were on view, and these are practically identical with the Japanese aconite root of commerce, as illustrated by Dr. Langgaard. The author pointed out that as a logical sequence japaconitine should be the alkaloid of *A. uncinatum*, L., var. *japonicum*, and the jessaconitine of Mahoski the alkaloid of *A. Fischeri*.

THE SOURCE OF JAPANESE CHILLIES.

E. M. Holmes said that the botanical source of the bright red Japanese chillies of commerce has hitherto been obscure. Inquiries were made during the Japan-British Exhibition in London in 1910, when a leafless stem was shown bearing chillies crowded in a tufted manner at the apex of the stem. The evidence obtained point to the small Japanese chillies, or "Takanotsumi," met with in Great Britain as being derived from either *C. conoides* and *C. frutescens*, or both, and the slightly larger "Tenjiku mamori" chillies, from a form of *C fastigiatum*, Rl., for which the name of *C. fasciculatum* is proposed. This form is as yet not recorded from any other country than Japan.

COMMERCIAL ESTERS.

Next year's president, John C. Umney, in conjunction with C. T. Bennett, have investigated the commercial esters used in perfumery and for flavoring. The esters are usually made on a large scale, either by distilling the anhydrous alcohol and the proper acid (in concentrated form, or a salt may be used), together with a dehydrating agent such as sulphuric acid; or by dissolving the acid in the alcohol and passing hydrochloric acid gas through the solution. . The successful production of pure products depends largely on the careful purification of both acids and alcohols, especially in the case of amyl alcohol and butyric acid. The great variation in commercial esters is reflected very largely by the differences in prices asked for them.

Tennessee Pharmaceutical Associations Convene

The twenty-seventh annual convention of the Tennessee Pharmaceutical Association was held in Chattanooga on July 9, 10 and 11. The Travelers' Auxiliary and the Ladies' Auxiliary held their annual sessions at the same time. The Pharmaceutical Association was called to order by President Samuel C. Davis, following which Mayor Thompson delivered the address of welcome. Besides the business sessions, in which much of importance was transacted and reports of the various committees read, an interesting program of entertainment was provided. Memphis was chosen as the place of meeting for next year and the following officers elected: President, E. C. Finch, Waverly; vice-presidents, S. R. Miller, Chattanooga; D. J. Kuhn, Nashville; Ed Collins, Memphis; secretary, T. J. Shannon, Sharon; treasurer, Iliff Conger, Sewanee.

The Ladies' Auxiliary elected officers as follows: President, Mrs. F. A. Robinson, Memphis; first vice-president, Mrs. E. F. Moore, Chattanooga; second vice-president, Mrs. S. Scruggs, Jackson; secretary and treasurer, Mrs. J. C. Ammons, Gleason.

The new officers of the Travelers' Auxiliary for the coming year are: President, J. R. Bass, Nashville; first vice-president, V. A. Coleman, Louisville, Ky.; second vice-president, E. F. Trolinger, Jackson; third vice-president, Al A. Yeager, Knoxville; secretary and treasurer, W. D. Phillips, Nashville. It was decided by the Woman's Auxiliary to establish a scholarship in some school of pharmacy for the worthy son of some deceased druggist.

Iowa Druggists Meet

The Iowa Pharmaceutical Association held its convention in July at Sioux City, together with the Iowa Pharmaceutical Travelers' Association and made a record for itself in point of attendance. The opening address was delivered by President N. F. Reed of Ottumwa, in which he lauded the druggist's profession, made certain recommendations for its improvement and condemned the itinerant vendors of patent medicines. Resolutions were adopted by the association demanding that none but licensed pharmacists be allowed to sell medicines, and a committee was appointed to appear at the next session of the legislature to put this into effect. After considerable debate the annual dues of the association were increased from $2 to $3. A motion was offered to tax all delegates in attendance at conventions $1.50 to help defray the expenses of entertainment, but this was overruled and it was decided to continue the custom of having the city in which the convention was held pay the cost of such entertaining. The following officers were elected for the ensuing year: President, Frank Shane, Eldon; vice-presidents, W. L. Halden, Waterloo; J. A. Todd, Sioux City; C. L. Cunningham, Woden; secretary, A. L. Falkenheimer, Algona; treasurer, J. M. Lindley, Winfield. The Travelers' Association elected the following officers: President, E. L. Beard, Rock Island; first vice-president, F. H. Morse, Chicago; second vice-president, George Bennett, St. Louis; third vice-president, Charles E. Schall, New York; secretary and treasurer, C. T. Clark, St. Louis. The 1913 meeting will be held in Waterloo.

N. F. REED,
Ottumwa, President.

Virginia Druggists Hold Meeting

CHARLES D. FOX.
Roanoke, President-elect.

The thirty-first annual convention of the Virginia Pharmaceutical Association was held in July at Natural Bridge. The address of welcome was delivered by the mayor; other addresses were made by Polk Miller, Richmond; H. T. Littlejohn, Leesburg; Charles D. Fox, Roanoke; T. A. Miller, Richmond; W. D. Miller, Charlotte. The election of officers resulted in the following being chosen: President, C. D. Fox, Roanoke; first vice-president, C. D. Owens, Wytheville; second vice-president, H. T. Littlejohn, Leesburg; secretary, E. L. Brandis, Richmond; treasurer, H. S. Eley, Suffolk.

Ohio Association Elects Officers

The Ohio Pharmaceutical Association held its annual convention at Cedar Point July 9, 10 and 11, and elected the following officers: President, F. F. Vortcamp, Lima; vice-president, C. M. Shafer, Canal Fulton; treasurer, E. H. Harrington, Columbus; secretary, Theodore D. Wetterstroem, who was re-elected for the tenth successive term. The Traveling Men's Auxiliary elected the following officers: President, Edward P. Austin; secretary, Van V. Dorr; treasurer, Frank Broderick, re-elected. Columbus was chosen for the 1913 convention.

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HENRY M. WHELPLEY,
St. Louis, treasurer.

AMERICAN PHARMACEUTICAL ASSOCIATION

Programme of the Denver Meeting—Recommendations of the Committee on Transportation—Routes and Rates—Excursions After the Meeting

FOLLOWING is the programme for the sixtieth annual meeting of the American Pharmaceutical Association, which will meet at the Brown Palace Hotel, Denver, Col., on August 19:

The Programme

MONDAY, AUGUST 19.

9.00 a. m. Meeting of the Council.
10.30 a. m. Meeting of the National Association of Boards of Pharmacy.
3.00 p. m. First General Session.
(The Nominating Committee will meet immediately after the adjournment of the First General Session.)
9.00 p. m. President's reception.

TUESDAY, AUGUST 20.

9.00 a. m. Meeting of the Council.
10.00 a. m. Second General Session.
3.00 p. m. Section on Commercial Interests.
8.00 p. m. Section on Commercial Interests (second session).
8.00 p. m. Meeting of the Conference of Pharmaceutical Faculties.

WEDNESDAY, AUGUST 21.

9.00 a. m. Meeting of the Council.
10.00 a. m. Section on Education and Legislation.
3.00 p. m. Section on Practical Pharmacy and Dispensing.
3.00 p. m. Section on Education and Legislation (second session).
6.30 p. m. Separate Reunions of College Alumni.
9.30 p. m. Smoker.

THURSDAY, AUGUST 22.

9.00 a. m. Meeting of the Council (organization of the Council for 1912-13).
10.00 a. m. Section on Scientific Papers.
3.00 p. m. Section on Scientific Papers (second session).
8.00 p. m. Section on Practical Pharmacy and Dispensing (second session).
8.00 p. m. Joint Session of Boards of Pharmacy and Section on Education and Legislation.

FRIDAY, AUGUST 23.

8.00 a. m. Mountain excursion to Glacier Lake; visiting en route the University of Colorado and Boulder. Chautauqua entertainment by the citizens of Boulder. Return to Denver at 6 p. m.
8.00 p. m. Section on Historical Pharmacy.

SATURDAY, AUGUST 24.

9.00 a. m. Meeting of the Council.
10.00 a. m. Final general session.

Entertainments

In addition to the entertainments of the general programme printed above, the Local Committee has arranged for the following special excursion and entertainments for the ladies in attendance:

TUESDAY, AUGUST 20.

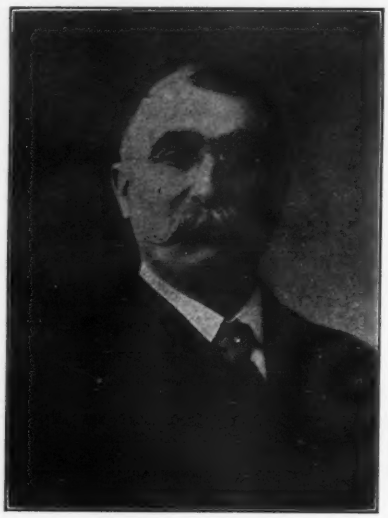
9.00 a. m. Fifty-mile trolley ride, visiting the foot-hills about Denver.
8.00 p. m. Concert and moving pictures by E. C. Fine, of Boulder.

WEDNESDAY, AUGUST 21.

9.00 a. m. Seeing Denver in automobiles.
2.00 p. m. Matinee at Elitch's Gardens. Battle of the Monitor and Merrimac. Zoological Gardens.
8.00 p. m. Toast banquet tendered by the ladies of the Denver State Pharmaceutical Association.

THURSDAY, AUGUST 22.

9.00 a. m. Autos.
3.00 p. m. Card party at Brown Palace.



JOHN G. GODDING,
Boston, president.

JAMES H. BEAL, SCIO, O.,
General secretary and editor of the Journal.

Report on Routes and Rates by the Transportation Committee

All who contemplate attending the Denver meeting of the American Pharmaceutical Association, which convenes on the afternoon of Monday, August 19, should purchase regular round trip summer excursion tickets, as no special rate has been made from the East. Members must use the same route east of Buffalo going and coming, but may go by one route and return by another west of that point. The routes both ways must be specified when purchasing tickets. Tickets will be good until October 31, and holders may stop over, on due notice, either going or coming.

Tickets may be purchased to Colorado Springs for the same price as to Denver, with stop over privilege at the latter point.

The members should decide before leaving for Denver whether or not they wish to take in the Salt Lake or the Yellowstone Park trip, since the tickets for these additional trips will cost less if purchased in the East than if bought at Denver.

The following routes are recommended by the committee: Members should consult the nearest member of the committee regarding local routes and time of departure of trains.

Friday, August 16, leave Boston (B. & A. and L. S. & M. S.) at 11.30 a. m., leave Albany (N. Y. C.) 5.15 p. m., leave Philadelphia (Lehigh Valley) 12.30 noon, leave New York (Lehigh Valley) 12.05 noon, leave Buffalo (Grand Trunk) 10.55 p. m.

Saturday, August 17, arrive Chicago (L. S. & M. S.) 12.50 p. m. (Grand Trunk) 2 p. m. Leave Chicago (Chicago, Burlington & Quincy) 5 p. m. Leave St. Louis (C. B. & Q.) 2.15 p. m. Arrive Burlington 10 p. m., connecting with Chicago train.

Sunday, August 18, arrive Denver 7.30 p. m.

The round trip fares by the routes indicated are given below:

Railroad Fares for Round Trip to Denver

	To Denver only.	Including Salt Lake City.	Including Yellowstone.	Including San Francisco.
Boston	$70.80	$83.80	$131.80	$113.30
New York	64.30	76.30	131.80	111.80
Baltimore	62.80	75.80	123.55	105.30
Philadelphia	65.55	78.55	126.30	108.05
Chicago	30.00	43.00	98.50	72.50
St. Louis	25.00	38.00	93.50	70.00
San Francisco	55.00	....	....	....

CHARLES M. FORD,
Denver, second vice-president and local secretary.

W. B. DAY,
Chicago, president-elect.

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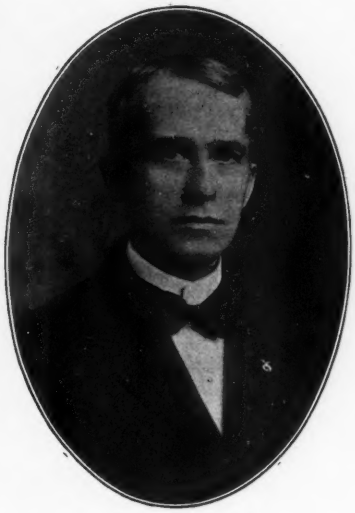
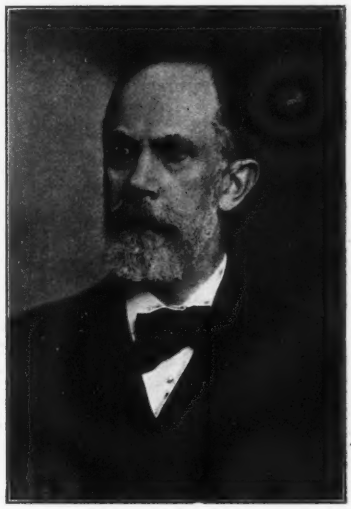
LEWIS DIEHL,
Louisville, Reporter on the Programme of Pharmacy.



EUGENE G. EBERLE,
Dallas, Chairman of the Council.



WILHELM BODEMANN,
Chicago, first vice-president.

The sleeper fare for the round trip will be $22 from New York, $12 from Chicago and $10 from St. Louis, with a discount of 20 percent. on upper berths.

Excursions After the Meeting

Tickets for excursions to Yellowstone Park, Salt Lake and far Western points should be purchased before leaving the East, as they can be bought in connection with the ticket to Denver cheaper than after arriving at Denver.

The Circle Trip

The Circle trip gives four days in the Colorado Mountains, affording a view of the most striking features in that section of the Rockies. On this trip the members travel by day only, stopping each night at a hotel. The fare is $28 for the round trip, or in parties of ten or over $20.80.

The Salt Lake Trip

The Salt Lake trip takes in the Royal Gorge of the Arkansas, the Tennessee Pass, and carries the traveler through Leadville, Grand Junction, and across the Utah desert to Great Salt Lake and return. For a party of 100 or more a special train will be provided, with choice of routes returning to Denver. A rate of $22.50 has been made for the round trip from Denver to Salt Lake and return. A committee of Salt Lake druggists will be in Denver to arrange for a visit to that city after the convention.

The Yellowstone Park Trip

The Yellowstone Park trip includes the Salt Lake trip. The figures given for the other routes include fare only. For the Yellowstone Park trip the fare only is given up to the Park entrance, but the stage fare and the hotel bills in the Park are also included. A party of New England members have arranged for a personally conducted tour, which will include the visit to Salt Lake and through the Yellowstone Park, returning by way of Chicago, where they will take the steamer Northland on Saturday, September 7, arriving at Buffalo at 6 a. m. on September 10. Further particulars regarding this particular tour may be obtained fom the Boston member of the committee, C. Herbert Packard, Central square, Boston.

A Trip to the Pacific Coast

Eastern members who may desire to take this occasion to visit the Pacific Coast can do so at a slightly increased expense. Above the fare is given by way of Denver and Salt Lake City. A visit to the Yellowstone Park may be made on this trip at an additional cost of $55.50, this latter sum covering meals and four nights' lodgings in the Park, as well as fare from Salt Lake City to the Park.

From the Pacific Coast

The Trans-Continental Passenger Association has made an excursion rate to Denver of $55 from California common points, from Bellingham, Everett, Spokane, Seattle and Tacoma, Wash., New Westminster, Vancouver and Victoria, B. C., and Portland, Ore. Local fare must be paid to reach these common points. On arbitrary routes, going one way and returning by another, additional fare will be charged, details of which can be had from local ticket agents.

These tickets will be placed on sale at California points on August 14, 15 and 16 and Northern Pacific Coast points on August 14, 15 and 16. These tickets must be validated at Denver on the day on which the return journey begins. Otherwise they will not be accepted.

Pacific Coast members should confer with Charles E. Whilden, 1727 Pine street, San Francisco, with a view to arranging for a special party.

Local Train Arrangements

Further information can be obtained regarding the departure of trains from any particular point from the nearest member of the Committee on Transportation, whose names are given below:

Atlanta, Ga.—W. S. Elkin, jr., Peachtree and Marietta streets.
Baltimore, Md.—Charles Caspari, jr., University of Maryland.
Boston, Mass.—C. Herbert Packard, 7 Central square.
Chicago, Ill.—Wilhelm Bodemann, Hyde Park.
Cincinnati, O.—Charles G. Merrell, Fifth and Butler streets.
Cleveland, O.—L. C. Hopp, 1104 Euclid avenue.
Denver, Col.—W. A. Hover, 1437 Lawrence street.
Minneapolis, Minn.—F. J. Wulling, Minnesota University.
San Francisco, Cal.—Charles W. Whilden, 1727 Pine street.
St. Louis, Mo.—H. M. Whelpley, 2342 Albion place.
New York.—Caswell A. Mayo, 66 West Broadway, *Chairman.*

Colorado's "Silent Partners"

Preliminary to the meeting of the American Pharmaceutical Association, which will be held in Denver on August 19, the wives and daughters of Colorado druggists, who style themselves "The Silent Partners," have reorganized themselves and elected the following officers: President, Mrs. C. M. Ford; vice-presidents, Mrs. J. C. Fames, Mrs. R. H. McKenzie, Mrs. John Anglum; secretary, Mrs. Charles Skinner; treasurer, Mrs. E. L. Scholtz.

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N. A. R. D. MEETING AT MILWAUKEE

The Official Programme—Chicagoans Will Turn Out in Force—Philadelphia Wants 1913 Meeting

THE fourteenth annual meeting of the National Association of Retail Druggists will be held in the Auditorium at Milwaukee during the week beginning August 12. The pharmacists of Chicago have prepared several resolutions for presentation to the convention which was given in another column. Some four hundred members are expected to take the steamer from Chicago to Milwaukee on Monday morning, August 12.

The Philadelphia delegation likewise have definite idea as to what they should like done, and one of the things is that they would like to have Philadelphia selected as the place of meeting for 1913. Reports from Jersey City indicate that the attendance of delegates will be up to the usual mark both in numbers and in enthusiasm.

While the Hotel Pfister has been named as official headquarters, no single hotel in Milwaukee could accommodate the number of visitors expected to be present. As will be observed by the following programme, ample entertainment will be provided both for the members and for the ladies who may accompany them.

The Program

MONDAY, AUGUST 12.

7.45 p. m. Formal opening of National Drug Show, Juneau and Kilbourn Halls, Auditorium.
8.00 p. m. Reception to visiting ladies in Walker Hall, Auditorium.
8.30 p. m. Opening of convention in Plankinton Hall, Auditorium. Reception of delegates. Announcement of assistant secretaries and of Committee on Credentials.

TUESDAY, AUGUST 13.

9.30 a. m. President's address. Report of Executive Committee. Presentation of resolutions.
2.00 p. m. Automobile ride for ladies and kaffe klatsch.
2.30 p. m. Reports of officers and of organization, publicity, advertising and law departments. Presentation of resolutions.
8.30 p. m. President's reception and grand ball in Peter Engelmann Hall, Auditorium.

WEDNESDAY, AUGUST 14.

9.30 a. m. Assembling of convention in Engelmann Hall. Reports of committees.
2.30 p. m. Trolley ride for ladies. Roll call of states for presentation of resolutions. Report of committee on national legislation.
8.00 p. m. Open session of committee on finance and resolutions.

THURSDAY, AUGUST 15.

9.30 a. m. Final reports of committees on organization, transportation, nomination, U. S. P. and N. F. propaganda, followed by an open session for discussion on propaganda.
1.30 p. m. Trolley ride to factory of Pabst's Best Tonic, thence to White Fish Bay Summer Resort, as guests of Pabst's Tonic Department.
8.30 p. m. Reports of committees on finance and resolution. Election of officers.

FRIDAY, AUGUST 16.

2.00 p. m. Entertainment by the French Lick Springs Hotel Company.

The Women's Organization, N. A. R. D., will also hold their meeting during the same week, beginning August 13. Their program of events runs as follows:

TUESDAY, AUGUST 13.

10.00 a. m. Opening session in parlor of Hotel Pfister. President's address, officers' reports and appointing of committees.

WEDNESDAY, AUGUST 14.

9.00 a. m. Reports of chapters and standing committees.

THURSDAY, AUGUST 15.

10.00 a. m. Reports of committees on resolutions and nominations. Election of officers.

N. W. D. A. to Meet in Milwaukee October Fourteenth

Announcement is made that the thirty-eighth annual convention of the National Wholesale Druggists' Association will be held at the Hotel Pfister, Milwaukee, from October 14 to 19. The following is the program for the meeting:

PROGRAMME:

Monday, October 14, 8 p. m.—Informal meeting of Wholesale Druggists.
Tuesday, October 15, 10 a. m.—First session of the National Wholesale Druggists' Association.
Tuesday, October 15, 2 p. m.—Second session of the National Wholesale Druggists' Association.
Tuesday, October 15, 9 p. m.—President's reception. Dancing and buffet luncheon.
Wednesday, October 16, 10 a. m.—Third session of the National Wholesale Druggists' Association.
Wednesday, October 16, 11 a. m.—Automobile ride for ladies, followed by luncheon at Donges' Bay.
Wednesday, October 16, 2 p. m.—Informal meeting of Wholesale Druggists.
Wednesday, October 16, 8 p. m.—Theater party.
Thursday, October 17, 10 a. m.—Fourth session, National Wholesale Druggists' Association.
Thursday, October 17, 2 p. m.—A visit to the laboratories of the Horlick's Malted Milk Company. Special train will leave the C. & N. W. Station at 2 p. m., returning to Milwaukee about 6 p. m. In addition to viewing the plant a luncheon and entertainment will be provided.
Thursday, October 17, 8 p. m.—Banquet to National Wholesale Druggists' Association and ladies.
Friday, October 19, 10 a. m.—Fifth session, National Wholesale Druggists' Association.

CHICAGOANS BOUND FOR MILWAUKEE

Four Hundred N. A. R. D. Members Expected to Go Up by Steamer—Resolutions Proposed by Chicago Retail Druggists' Association

CHICAGO, Aug. 5.—At the time of writing all interest among a majority of Chicago druggists is centered on the annual convention of N. A. R. D. at Milwaukee one week hence.

Chicago claims to have the largest local branch of the National Association in its C. R. D. A. and with Milwaukee only 84 miles away it is sure the local association will have, at least as big, and probably a larger delegation at the National Convention, than any other city.

In preparation for the convention a special meeting of C. R. D. A. has been called for Tuesday, August 6, at 2:30 P. M. The meeting will be held in the rooms of the State Board of Pharmacy, in the Northwestern University Building. At this meeting resolutions are to be passed for presentation and probable adoption by the National Convention the following week. Following are some of the resolutions which it is known in advance will be presented at the special meeting:

WHEREAS, The use of fluidextracts in any formula for making preparations is generally detrimental to the physical properties and medicinal effects of such preparations, and

WHEREAS, Such use of fluidextract is for the sole advantage of the manufacturers of fluidextracts and not the retailers, nor consumer or patients; therefore be it

Resolved, That crude assayed drugs should be recommended in every instance instead of precipitated or will-be precipitated fluidextracts for use in medicinal preparations.

WHEREAS, The N. A. R. D. is the largest association of retail druggists of America, and

WHEREAS, The N. A. R. D. is engaged to improve not only the commercial, but also the ethical part of the drug trade, and

WHEREAS, The working formula for some of the preparations of the N. F. can be and has been greatly improved upon by the practical pharmacist, therefore be it

Resolved, That the N. A. R. D. is not only entitled to a large representative delegation in the A. Ph. A. convention, but also to representation in its council, where the former's practical ideas can be made use of in determining workable and satisfactory formulas.

WHEREAS, In a multitude of counsel there is wisdom, and inasmuch as the business of the U. S. P. and N. F. Committee of the N. A. R. D. is transacted by mail, etc., be it

Resolved, By the C. R. D. A. in special meeting assembled we advocate changing the by-laws and constitution of the N. A. R. D., increasing the membership of the U. S. P. and N. F. Committee of the N. A. R. D. from five to fifteen.

NOTE.—Only the last resolution is offered by H. J. Holthoefer.

Arrangements have been made for the local delegation to the N. A. R. D. Convention to go to Milwaukee on the steamship Christopher Columbus, the big whaleback of the Goodrich Transit Co. It is estimated that, counting the ladies, the Chicago delegation will number between 400 and 500. A round trip by boat costs only $1.50, good returning at any time during the summer. Among the Chicago delegates will be the following:

W. H. Brown, H. J. Holthoefer, W. H. Armbrecht, Isam M. Light, C. A. Storer, John J. Boehm, J. A. Mahaffy, Joseph A. Hottinger, Joseph F. Forbrich, James P. Crowley, Edward Williams, George Kappus, O. F. Niethammer, John C. Rusch, J. F. Pierce, Ben Aron, Joseph Goeppner, George J. Guerten, E. G. Knudson, William Boch, W. R. Tervehn, William Bodemann, J. Topf, A. E. Zuber, John T. Lueder, L. P. Larsen, E. S. Bernard, T. F. Cannon, H. M. Moffett, F. D. Dempster, Joseph E. Dubsky, Frank Dubsky, L. Eicher, R. Van Danden, Peter Hauber, Charles Benz, W. W. Klore, L. J. Pelikan, Soren Mathison, S. Jerozel, Charles Rubens, Thomas Clarisey, J. H. Montgomery, Julius Riemenschneider, P. J. Forbrich, Herman Fry, George Fry, O. P. Stepphan, John Bakkers, O. U. Sisson, Fred Kellett, William P. Knoche, William Krizan, D. P. Siebert, J. H. Wells, Robert Heller, Samuel Antonow, Joseph Swanson, Frank Kremer, Alfred Schilling.

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THE NEW RICHARDSON BILL

Many Changes in New Text Proposed by the Sub-Committee—Still Too Radical to Suit the Drug Trade

WASHINGTON, August 6.—On July 24, Judge C. E. Richardson, chairman of the subcommittee of the House Committee on Interstate and Foreign Commerce, entrusted with the preparation of a bill for the amendment of the food and drugs act, reported the revised draft of the measure on which he has been working, for consideration by the full committee. The new Richardson bill is a very great change from the draft which was presented by Mr. Richardson earlier in the session, and includes a number of features formerly incorporated into other bills which were pending before the committee. The measure has already been read by a number of representatives of drug interests, including Warwick M. Hough, of St. Louis, and has been pronounced by them to be unsatisfactory. Some critics of the bill apply the word "disastrous" to the bill in its present form. The measure is looked upon with favor not only by Democrats but by Republicans on the committee, who are friendly to the pure food and drugs idea. There is, however, so much opposition in many quarters that Mr. Richardson will not attempt to secure the enactment of the bill at this session of Congress in the House of Representatives, but will wait until next winter before attempting to press the measure. It is expected, however, that the full committee will report the bill, so that it may go to the House calendar. Then if, for any reason, changes should be thought wise, the measure can be recalled at the opening of the session and substitute provisions can be inserted in place of those that are not desired. Mr. Richardson says that in the meantime he hopes there will be full discussion and criticism of the bill by the trade and by all interests that are concerned with the subject, including trade journals, and that he is particularly desirous of getting letters of suggestion and criticism. The new form of the measure is as follows:

A BILL

To amend Sections 6, 7, and 8 of the Food and Drugs Act, approved June 30, 1906.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Sections 6, 7, and 8 of the Food and Drugs Act, approved June 30, 1906, be amended as follows:

Amend Section 6 by striking out the entire section and substituting the following:

"SEC. 6. That the term 'drug' as used in this Act shall include all medicines and preparations recognized in the United States Pharmacopœia or National Formulary for internal or external use and any substance or mixture of substances intended to be used for the cure, mitigation, or prevention of disease of either man or other animals. Also soda lye, potash lye, abortifacients, cosmetics, toilet preparations, or depilatories and such articles or substances that are or may be used in connection with depilatories, remedies for drug addiction, alcoholism, debility, obesity, and leanness. The term 'food' as herein used shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound."

Amend Section 7 by striking out the entire section and substituting the following:

"SEC. 7. That for the purposes of this Act an article shall be deemed to be adulterated—

"In the case of drugs:

"First. When a drug, recognized in the United States Pharmacopœia or National Formulary, is sold under or by any name it differs from the standard of strength, quality, or purity, as determined by the test laid down in the United States Pharmacopœia or National Formulary official at the time of investigation: *Provided,* That no drug defined in the United States Pharmacopœia or National Formulary shall be deemed to be adulterated under this provision if the standard of strength, quality, or purity be plainly stated upon the bottle, box, or other container thereof, although the standard may differ from that determined by the test laid down in the United States Pharmacopœia or National Formulary: *And provided further,* That the strength as laid down in the United States Pharmacopœia or National Formulary be also stated thereon.

"Second. If its strength or purity falls below the professed standard of quality under which it is sold.

"Third. If it contain any methyl or wood alcohol, except when used for veterinary purposes.

"Fourth. If any cosmetic, toilet preparation, or depilatories and such articles or substances that are or may be used in connection with depilatories contain any poisonous or deleterious ingredient, such article shall be deemed to be adulterated.

"In the case of confectionery:

"If it contain terra alba, barytes, talc, chrome yellow, or other mineral substances or poisonous color or flavor, or other ingredient deleterious or detrimental to health, or any vinous, malt, or spirituous liquor or compound or narcotic drug.

"In the case of food:

"First. If any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength; or if any hermetically sealed package containing a food product, packed on or after the date of the passage of this bill, be not packed as full of said food product as is practicable for the sterilization without injuring its quality or appearance; or if it contain a greater amount of added water than is necessary to fill the interstices and cover the product; or if any food product in a hermetically sealed package contain any added by-product made from refuse or waste material.

"Second. If any substance has been substituted wholly or in part for the article.

"Third. If any valuable constituent of the article has been wholly or in part abstracted.

"Fourth. If it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed.

"Fifth. If it contain any added poisonous or other added deleterious ingredient which may render such article injurious to health: *Provided,* That when in the preparation of food products for shipment they are preserved by any external application applied in such manner that the preservative is necessarily removed mechanically or by masceration in water, or otherwise, and directions for the removal of said preservatives shall be printed on the covering or the package, the provisions of this Act shall be construed as applying only when said products are ready for consumption.

"Sixth. If it consists in whole or in part of filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal or one that has died otherwise than by slaughter."

Amend Section 8 by striking out the entire section and substituting the following:

"SEC. 8. That the term 'misbranded' as herein used shall apply to articles of food or articles which enter into the composition of food or to all drugs the package or label of which food or drug shall bear any statement or design regarding such articles of food or drug, or the ingredients and substances contained therein, which shall be false or misleading in any particular, and to any food or drug product which is falsely branded as to the state, territory, or country in which it is manufactured or produced, or to any food or drug product, the label or any advertisement, poster, circular, or other means of publicity of such food product contain any claims or representations, duly authorized by the producer or manufacturer, relative to nutritive, preventive, remedial, or curative properties which are false or misleading in any particular.

That for the purposes of this Act an article shall also be deemed to be misbranded—

"In the case of drugs:

"First. If it be an imitation of or offered for sale under the name of any other article.

"Second. If the contents of the package as originally put up shall have been removed, in whole or in part, and other contents shall have been placed in such package, or if the package fail to bear a statement on the label of the quantity or proportion of any acetenalide, acetphenetidin, alcohol, aloes, alpha and beta eucain, alypin, anesthesin, antipyrin, arsenic, cannabis, cantharides, cascara, chloral, chloroform, cocaine, cotton root, cresol, digitalis, ergot, heroin, holocain, hydrocyanic acid, lead salts, mercury salts, morphine, novocain, nux vomica, opium, paraphenylendiamin, pennyroyal, phenacetin, phenol, rue, savin, stovaine, strychnine, tansy, veronal, or any derivative or preparation of any such substance contained therein.

"Third. If it be offered for sale, barter, or exchange from any State, Territory, or the District of Columbia into any other State, Territory, or the District of Columbia direct to the consumer, unless the package is marked to show that it has been manufactured by a person, firm, or corporation holding an unsuspended or unrevoked license issued by the Secretary of Agriculture: *Provided,* That this requirement is waived in the case of soda lye and potash lye.

"Fourth. If it be a drug containing any cocaine, morphine, or opium, or any derivative or preparation of any such substances, unless so marked and registered as to enable the Secretary of Agriculture by proper regulations to ascertain the extent and nature of the commerce therein.

"Fifth. If the package or label bear a Government serial number or the guaranty legend together with the serial number and the composition of the product is not filed with the Bureau of Chemistry.

"In the case of food:

"First. If it be an imitation of or offered for sale under the distinctive name of another article.

"Second. If it be labeled or branded so as to deceive or mislead the purchaser, or purport to be a foreign product when not so, or if the contents of the package as originally put up shall have been removed in whole or in part and other contents shall have been placed in such package.

"Third. If in package form, and the contents are stated in terms of weight or measure, they are not plainly and correctly stated on the outside of the package: *Provided, however,* That a slight or immaterial variation from the stated weight is permissible when the variations are made to appear as often above as below the stated weight or volume, and to the same extent and proportion."

A New Way of Making Sales

Syracuse druggists have been victims of either a unique swindling game or a clever advertising scheme, following the visit of a young Japanese, who called at a number of drug stores, inquiring for a brand of ointment of which none of the druggists ever heard. He displayed a tin cover of one of the boxes. Not having such a preparation, some of the druggists acceded to the young man's request to obtain it from the manufacturers. The Japanese would leave $1 deposit and order half a dozen boxes. The first druggist to become suspicious was F. J. Nye, who ordered the preparation and upon its arrival was required to pay $4.75, which he did. As the expressman was leaving he mentioned having a similar package for the Bissell Pharmacy. Mr. Nye then became suspicious, returned his package, secured the money paid, and telephoned to Mr. Bissell, and then to Edward Cook, president of the Syracuse Druggists' Association, who, with G. E. Thorpe, secretary of the association, set about to warn all the druggists in the city. In several cases it was found that the ointment had been bought and paid for.

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HARRISON OPIUM BILLS REVISED

Wholesalers' Tax Increased—Retailers' Reduced to Five Dollars—Chloral and Cannabis Eliminated—Minimum Quantities of Opium and Its Preparations Exempt from the Law.

WASHINGTON, July 19.—Congressman Francis Burton Harrison, of New York, who introduced the bills regulating the traffic in opium, has introduced these bills in amended form. One of these measures amends the opium act which prohibits the manufacture in or the importation into the United States of smoking opium and the other is a modification of the Wright opium bill which was printed in full in our issue for June on page 70. The differences between the bill as there printed and the bill as introduced by Mr. Harrison yesterday as H. R. 25834 are given below: Chloral and cannabis are stricken out of the new bill, the special tax is placed at $100 for wholesalers, instead of $50, and at $5 for retailers, instead of $10, and a new section is introduced exempting from the provisions of the act remedies containing not more than two grains of opium, or its equivalent, to the ounce. This section reads as follows:

Sec. 10.—That the provisions of this act shall not be construed to apply to persons making sales, distribution, or disposition of preparations and remedies which do not contain more than two grains of opium, or one-fourth of a grain of morphine, or one-fourth of a grain of heroin, or one grain of codeine, or their salts and derivatives in one fluidounce; or if a solid or semi-solid preparation, in one avordupois ounce; nor to powder of ipecac and opium, commonly known as Dover's powders; nor to liniments or ointments which are prepared for external use only:

Provided further, That such remedies and preparations are sold, distributed or disposed of as medicines and not for the purpose of evading the provisions of this act.

Mr. Harrison's bill for the amendment of the opium importation act introduced simultaneously with the one just quoted prohibits the importation or exportation of opium prepared for smoking and prohibits the exportation of opium or cocaine and of any preparation or derivative of opium or cocaine to any foreign country except in accordance with the laws and regulations of that country.

It seems wholly improbable that action will be taken on either of these bills at this session of congress, as indications are that congress will decline to act on any bills except those required for the conduct of the government affairs until after the November elections, unless, indeed, some action be taken in tariff matters which have a political bearing. Both bills were referred to the Committee on Ways and Means.

Registered in Wisconsin

At the meeting of the Wisconsin Board of Pharmacy, held in Madison in July, the following were granted certificates:

Registered pharmacists: O. W. Brehmer, W. C. Kettelhut, W. H. Weitenhagen, R. A. Zimmerman, Sister Alphonsus Porter, Sister Mary Regina, F. J. Marlewski, W. C. Hermes, Milwaukee; Sister Mary Gonzaga, L. A. Derse, J. J. Heinisch, Racine; Alf Bjerke, Eau Claire; F. E. Snyder, Greenwood; J. A. Weissenberger, C. A. Boerner, La Crosse; Win Suits, Medford; L. J. Koppa, Wausau; R. F. Olson, Merrill; H. F. Mayer, Kenosha; E. F. Worm, Fond du Lac; R. M. Thompson, Abbotsford; P. M. Klug, Whitewater; A. J. Schmidler, Port Washington; Miss Madel D. Clark, Wild Rose; F. W. Barnstein, Manitowoc; L. D. Stephenson, Madison; W. A. Perkins, Deerfields; C. A. Nelson, Waupaca; J. M. Casterline, Iron River; L. A. Bossmann, Chicago, Ill.

Registered assistant pharmacists: Joseph Reinwand, Edwin Wiegand, W. H. Lippold, W. J. Pergande, C. A. Ganing, Nelson Sherwood, A. A. Zelm, Benjamin Porath, John Steinmeyer, jr., F. T. Tobin, F. A. Dulak, H. J. Weissenborn, Milwaukee; E. A. Zoesch, Butternut; R. O. Herreman, Rio; J. A. McHenry, Bayfield; T. A. Pluck, Horicon; W. I. Wagener, Sturgeon Bay; H. T. Hanson, Eau Claire; F. W. Jensen, Oshkosh; B. J. Schlum, Merrill; A. M. Hrubesky, Neenah; M. H. Regner, West Bend; G. W. Hillary, jr., Linden; P. A. Dahl, Viroqua; N. C. Enger, Dodgeville, A. L. Quigley, Lake Geneva.

The next meeting of the board will be held in Madison, October 15-18.

The New Dean of the Cleveland School

Dr. T. Bernard Tanner, who has been recently elected dean of the faculty of the Cleveland School of Pharmacy, Western Reserve University, to succeed Dr. N. A. Dubois, was born at Soda Springs, Col. His early education was received in the public schools and academy of Leadville. Later he attended St. Mary's Academy, Mount Carmel, Pa., and finally the Philadelphia College of Pharmacy, from which he was graduated with honors in 1911. In September, 1911, he was appointed to the chair of Theoretical and Applied Pharmacy of the Cleveland School of Pharmacy to fill the vacancy left by the resignation of Dr. H. V. Arny, and was elected to the deanship on June 1, 1912 Dr. Tanner has changed the entire pharmacy course at the college, which will embrace subjects not given in any other similar institution; he has established a course in dispensing, one in pharmaceutical jurisprudence, a course of special lectures and a course in emergencies and hygiene.

T. BERNARD TANNER,
Dean of the Cleveland School of Pharmacy.

Dr. Tanner spent twelve years in the retail drug business, and besides being professor of theoretical and applied pharmacy, professor of pharmaceutical Latin and director of the pharmaceutical laboratories, he is secretary of the Northern Ohio Branch, A. Ph. A., and secretary of the medico-pharmaceutical section of the Academy of Medicine.

To Raise the Standard of Pharmacy in New York

At a recent meeting in the office of the State Commissioner of Education at Albany the pharmacy council of the board of regents, of which Dean H. H. Rusby, of the New York School of Pharmacy, and Dean William C. Anderson, of the Brooklyn College of Pharmacy, are members, a resolution was passed requiring that for admission to the state licensing examinations a three year course be necessary to attain the degree of Bachelor of Science in Pharmacy, and then only after the completion of a four years' preparatory high school course. It is also recommended that the degree of Graduate of Pharmacy be conferred only after the completion of a two year course, and that the degree of Doctor of Pharmacy be conferred only after three years of resident work after attaining the degree of Bachelor of Science. The object of these provisions is to have a uniform standard in all colleges of pharmacy in the state, and graduates of institutions in other states will have to fulfill these requirements before presenting credentials for admission to licensing examinations. The new rules will not become effective until 1913.

Drug Trade Golf Players

The New York Drug and Chemical Club Golf Association had an outing on July 2 at Deal Golf Club. There were present President Carragan and Messrs. Croselmire, Hamann, Kuttroff, McClain, McKesson and C. G. Stone. The best gross score was made by Mr. Stone, while the best score and the cup were taken by Mr. Carragan. It was an ideal day, an ideal course and a most enjoyable time was had by every one. The meeting of August 8, at Fox Hills, resulted in the cup being won by Mr. Kuttroff, who had the best net score. There were present at this meeting Messrs Carragan, Croselmire, Hamann, Kuttroff, McKesson, Pierson and C. G. Stone. Romaine Pierson and C. G. Stone were tied for the best gross score.

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OBITUARY

JACOB BAUR.

Jacob Baur, founder, president and treasurer of The Liquid Carbonic Company, died suddenly on Friday, July 19, at the Michael Reese Hospital, Chicago. Mr. Bauer was born in Louisville, Ky., on October 12, 1856. At the age of fourteen he entered his father's drug store in Terre Haute, Ind., as a clerk. Later he attended the Philadelphia College of Pharmacy, from which he was graduated in 1881, and was then given the management of his father's store. He made a scientific study of the subject of soda water, and this led to his development of a process for liquefying carbonic acid gas, following which he formed the Liquid Carbonic Company and erected a small plant in Chicago. Later he devised the sanitary soda fountain and added its manufacture to his work with liquefied gas. The growth of the business became such that more space was necessary, and in 1911 a central plant was erected at Thirty-first street and Kedzie avenue, Chicago, at a cost of $1,000,000. Mr. Baur leaves a widow and one child.

JACOB BAUR.

Under Mr. Baur's direction the Liquid Carbonic Company has grown to have large manufacturing plants in thirteen cities aside from that in Chicago.

About three years ago Mr. Baur married Miss Bertha M. Duppler, who was private secretary for three successive postmasters of Chicago and who had been admitted to the bar. His widow and one child, of fourteen months, survive him. Mrs. Baur has taken an active interest in the affairs of the Liquid Company and, we understand, is to succeed her husband as president of the company and its active head.

HENRY WEIMAR.

Henry Weimar, a well known druggist of Hot Springs, Ark., died at Appleton, Wis., on Sunday night, July 28, the home of his boyhood. Mr. Weimar was born in 1862, being fifty years of age at the time of his death. His health had been failing him for several months and in the hope of getting relief he had made the journey to his former home. Mr. Weimar took an active part in pharmaceutical affairs, at one time holding the position of president of the Arkansas Pharmaceutical Association, and was a member of the Arkansas State Board of Pharmacy at the time of his death. At the meeting of the Arkansas Pharmaceutical Association in 1911 he contributed a paper entitled "The Arkansas Association of Pharmacists," setting forth the benefit which the Arkansas Association was to the druggists of the state, both members and nonmembers, which was published in the AMERICAN DRUGGIST for November, 1911.

HENRY WEIMAR.

DEATHS

BAGLEY.—In Cranston, R. I., on Sunday, July 21, James O. Bagley.

COLBURN.—In Peoria, Ill., on Monday, July 15, Walter P. Colburn, aged sixty-nine years.

COLVIN.—In New York City, on Wednesday, July 10, William H. Colvin, aged forty-four years.

CRAPSER.—In Nashua, Ia., on Monday, July 22, Clarence Crapser, aged forty-five years.

DOBSON.—In Brooklyn, N. Y., on Tuesday, July 9, William T. Dobson, aged seventy-three years.

ECKERS.—In Kansas City, Mo., on Tuesday, July 24, John P. Eckers, aged forty-seven years.

ELLIS.—In Little Sioux, Ia., on Friday, July 12, Clark Ellis.

FOOHEY.—In Ivesdale, Ill., on Monday, July 15, Timothy C. Foohey.

GEORGE.—In Houston, Tex., on Sunday, July 7, R. F. George, aged seventy-nine years.

GILMORE.—In Lynn, Mass., on Thursday, July 11, John H. Gilmore, aged thirty-eight years.

KELLEY.—In Worcester, Mass., on Saturday, July 13, Edward S. Kelley, aged sixty-five years.

KENT.—In Hydeville, Vt., on Thursday, July 25, Benjamin Kent, aged sixty-two years.

KERR.—In Louisville, Ky., on Thursday, August 1, William S. Kerr, aged forty-five years.

LITTLE.—In Portland, Ore., on Thursday, July 11, Henry W. Little, aged fifty-six years.

RAY.—In Utica, N. Y., on Monday, June 22, George D. Ray, aged seventy-one years.

RIEMANN.—In Utica, N. Y., on Saturday, July 20, Frederick G. Riemann, aged sixty-eight years.

REINERT.—In Diagonal, Ia., on Thursday, July 25, H. H. Reinert.

SPECK.—In Haverstraw, N. Y., on Monday, July 15, Oscar Speck.

TRUNK.—In Denver, Col., on Saturday, July 6, George E. Trunk, aged fifty-six years.

WALKER.—In Pittsburgh, Pa., on Sunday, July 21, John M. Walker, aged forty-one years.

WEAVER.—In Memphis, Tenn., on Wednesday, July 31, George I. Weaver.

Registered in Delaware

Following the examination of candidates by the Delaware Board of Pharmacy the following were granted certificates as pharmacists: H. K. McDaniel, Joseph Glassman, P. E. Foohl, L. F. Sanders, W. F. Lofland, D. A. Warren, W. F. Longendyke. J. H. Hayes was granted certificate as assistant pharmacist. The next meeting of the board will be held in Newark on October 2.

Registered by Iowa Board

Following is a list of the successful applicants who took the recent examinations of the Iowa board: Joseph Lowery, W. W. Pritchard, W. E. Nichols, Des Moines; W. E. Hutchinson, Truro; C. E. Nelting, Waverly; R. F. Kugel, Sioux City; G. W. E. Guertsen, Cedar Falls; J. A. Trotter, Ainsworth; F. Lankelma, Pella; G. R. West, Churdan; Alex. Bickford, Earlham; F. L. Gordinier, jr., Pulaski; C. E. Nolton, Waverly.

Registered in South Carolina

Of the thirty-eight who took the recent examination of the South Carolina board fifteen were successful and were awarded licenses. Their names follow: Lee Hodges, Greenwood; W. A. Mulloy, Cheraw; J. P. F. Smith, Florence; J. D. Yongue, Pickens; C. A. Sanders, Beaufort; J. E. Smith, S. L. R. Miller, T. C. Hanley, G. W. Franklin, W. A. Comar, E. M. Cudworth, Charleston; G. W. Matthews, Columbia; J. C. Armstrong, Greenville; W. G. White, jr., Yorkville; C. A. Davis, Baltimore.

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Greater New York

Norman E. Lynch, the Lilly representative in Utica, N. Y., was a recent visitor in the city.

Royal C. Brown, of Alexandria, Va., salesman for Eli Lilly & Co., spent a part of his vacation in the big city.

Samuel W. Fairchild, of Fairchild Bros. & Foster, is spending the summer at his camp at Loon Lake, in the Adirondacks.

A. G. Kellner, of the pharmaceutical department of the Gibson Drug Company, Rochester, spent several days in the city recently.

Dr. C. C. Haskell, of the Pharmacological Department of Eli Lilly & Co., was in attendance at the Atlantic City meeting of the American Medical Association.

J. H. Bradley, a leading druggist of Bermuda, spent a week in New York recently. Mr. Bradley is a graduate of the Buffalo College of Pharmacy and keeps in close touch with the American drug market.

Isaac C. Hillier, of Robert Hillier's Sons, has just returned rrom a month's fishing in the Maine woods, bringing with him an assortment of startling fish stories for the delectation of the members of the Drug Club.

Reginald Bray Martin, who has succeeded the late E. A. Clarke at Center Moriches, L. I., has succeeded in building up a large soda fountain business and has made himself personally very popular with the summer colony.

M. J. Breitenbach ran down to the city for a brief visit recently from his summer home on the banks of the St. Lawrence among the Thousand Islands, where he puts in several hours a day catching bass and muskalonge.

Albert Plaut is kept busy perfecting the arrangements for the approaching meeting of the International Congress of Applied Chemistry. His position as chairman of the local committee of entertainment involves serious obligations.

H. P. Rasmussen, Chicago manager of the Pasteur Laboratories of America, made a flying visit to New York during the past week. Mr. Rasmussen though a young man is an old hand at selling serums having been with the Pasteur laboratories for the past twelve years.

F. E. Smith's new pharmacy, at Madison Avenue and Fifty-ninth Street, is one of the prettiest and most complete drug stores in this city, and is being visited by many druggists who all comment favorably on its artistic fittings, which were installed by Seger & Gross Co.

J. C. Keogh, an old-time graduate of Richard Hudnut's Broadway store, and later in business on his own account at Ninety-eighth street and Columbus avenue, has re-entered the business from private life, as he sold his Columbus avenue business about a year ago. He has recently purchased the store at 146th street and Broadway.

Percy C. Magnus, president of Magnus, Mabie & Reynard, the essential oil house, spends the week ends at his summer home at Shelter Island and has developed into a champion deep sea fisherman. Mr. Magnus, his two sons and a party of six friends, recently caught 200 sea bass weighing from a pound to five and a half pounds in one day.

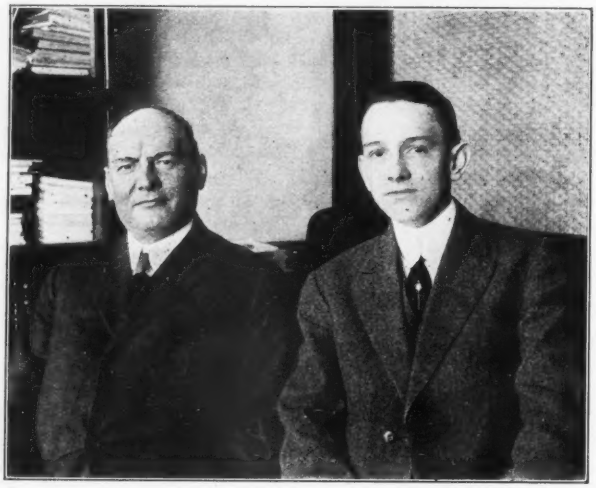
R. C. Stofer, president of the Norwich Pharmacal Company, Norwich, N. Y., recently paid a flying visit to the New York offices of the company, where he found business in excellent condition. The Norwich Pharmacal Company have recently added a large laboratory building to their already extensive plant, which increases their capacity by 50 percent., a step rendered necessary by the rapid growth of their business.

"Certified" Pharmacists

There was a meeting of the "Certification" Committee of the New York Branch of the American Pharmaceutical Association at the New York College of Pharmacy on Wednesday, July 24, Messrs. Bigelow, Diekman, Lascoff, Raubenheimer, Roemer and Weinstein (for Mr. Diamond) being present. The purpose of the meeting was to consider preliminarily a plan for certification of pharmacists. The committee will meet again in September to consider the matter further.

The Two Magnuses

Of interest to the general drug trade, and to the essential oil business in particular, is the announcement of the entrance into the firm of Magnus, Mabee & Reynard, of Mr. Magnus' son, Percy C. Magnus, jr. Mr. Magnus, jr., is an energetic young man, of good education, graduate of the Brooklyn High School,



PERCY C. MAGNUS AND HIS SON, PERCY, JR.

Mr. Magnus is receiving the congratulations of his numerous friends on the entry of his son, Percy, jr., into the firm of Magnus, Mabee & Reynard.

who gives every promise of high business ability. The elder Mr. Magnus, who is president of the company, has been known to the drug trade for twenty-five years, and the close association which has existed between him and his son has resulted in his taking the young man into partnership with him in the firm with which he himself has been so long identified.

Verein Deutscher Chemiker to Entertain

The New York Section of the Verein Deutscher Chemiker has arranged a celebration to be given in connection with the Eighth International Congress in honor of the twenty-fifth anniversary of the parent society, on Monday, September 2. A business meeting will be held at Havemeyer Hall, Columbia University, in the morning, at which lectures will be given by Dr. F. W. Frerichs and Dr. F. Raschig. This will be followed by luncheon at the Claremont. In the evening there will be a theatre party and collation at the Ritz Carlton Hotel for the ladies, and a kommers in the ballroom of the Arion Society, Fifty-ninth street and Park avenue, for the gentlemen. An informal programme has also been arranged for the entertainment of the European members who will be in the city during Saturday, August 31, and Sunday, September 1. On Saturday there will be luncheon at Brighton Beach Casino, and in the evening the members will attend the roof garden of the Hotel Astor. On Sunday, luncheon will be served at McGowan's Pass Tavern, Central Park, and in the evening the guests will visit the roof garden of the Waldorf Astoria.

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PHILADELPHIA WANTS N. A. R. D. MEETING

Invitation Sent to Milwaukee—City Inflammable License—Sixty-five Warrants for Soda Water Dealers—Board Making Investigations

PHILADELPHIA, August 7.—A boom for Philadelphia as the meeting place for the National Association of Retail Druggists in 1913 was inaugurated on Friday when the Philadelphia Association of Retail Druggists at its monthly meeting at the Philadelphia College of Pharmacy enthusiastically adopted a motion inviting the National Association to meet in Philadelphia. It was made by former President Samuel C. Henry following a suggestion to that effect made by President David J. Reese. The motion was amended by former President Frank W. Fluck, so as to carry instructions to Secretary J. H. Barlow to have a lot of ribbons, inscribed "Philadelphia 1913" for distribution at the convention. It was evident that the Philadelphians were going out to win the convention for next year.

Other features of the meeting were the adoption of several resolutions which will be laid before the national body next week at Milwaukee. The first of these resolutions, all of which were presented by Mr. Fluck, approved of the open afternoon sessions as being conducive to greater constructive work, and urged that the reports of officers and committees be concise and submitted at the morning sessions. A second resolution asked that the report of the resolutions committee be submitted on the afternoon of the last day instead of the evening. The third resolution recommended that Friday be included as a regular meeting day and that business sessions be eliminated in the evenings in favor of entertainment. The fourth resolution recommended the adoption of the multiple vote on the nominations and resolutions committees, making it possible for the representative of the state having numerous delegates at the convention to have more voice in the committees than the delegate from the state having but a single representative at the convention.

Another item, having to do with the coming national convention, was the announcement that as additional dues had been collected since the delegate election in July, the local association would be entitled to thirteen instead of twelve delegates. This will be taken care of by moving up the alternate with the largest number of votes.

Other important features of business included the recommendation by Chairman Henry, of the legislative committee, that the members take out the city license, necessary if more than a gallon of gasoline, benzine or similar product is kept on hand for sale at any one time, and the presentation by Chairman M. D. Allen, of the bylaw committee, of a provision defining a plan for naming the member of the association in the case of firm or corporation membership in the organization. This recommendation which will constitute an addition to the bylaws will lay over for thirty days and to be acted upon finally at the September meeting. Three new members were elected, and upon former Secretary Nathan A. Cozens was conferred honorary membership.

Business Brisk in Bucks

Cool weather during the past two weeks has caused a falling off in business that had been given a marked impetus by the extremely hot weather of July. In general volume the retailers seem very well satisfied with the summer thus far. In this connection the reports submitted at the July meeting of the Montgomery County (Pa.) Retail Druggists' Association at Norristown are of interest. At that meeting it was announced that among the druggists of that county, as well as of the adjoining county of Bucks, business generally for the summer up to that time had been better than it had been at any time for at least five years. This meeting elected as delegates to the N. A. R. D. convention Walter Rothwell, of Hatboro, and Reese C. Roberts, of Ambler, with Thomas McCoy, of Conshohocken, and Samuel N. Yeakle, of Norristown, alternates. A coincidence in this connection is that Messrs. Rothwell, Roberts and Yeakle were all graduated in 1895 from the Philadelphia College of Pharmacy.

PHILADELPHIA NEWS NOTES

David J. Reese, president of the P. A. R. D., has his family at Wildwood, N. J., for the summer and spends the week-ends at that popular resort.

W. I. Lerch and wife, the former one of the best known members of the sales staff of Colgate & Co. in this city, are spending several weeks at Cape May, N. J.

Treasurer George W. Fehr, of the P. A. R. D., also spends several days each week at Wildwood, where his family is summering, and is nursing a severe coat of sunburn, taken on during a recent fishing trip.

Milton C. Campbell, president of the H. K. Mulford Company, with Mrs. Campbell, sailed last month for an extended European tour. Vice-President H. K. Mulford has returned from his vacation in the Massachusetts Berkshires.

J. H. Rehfuss, a well known pharmacist of Brooklyn, accompanied by his wife and sister-in-law, Miss Seaver, of Stockton, Cal., motored over and spent several days with his brother, Charles Rehfuss, one of this city's representative pharmacists.

H. C. Byers, chairman, and Charles H. Marcy, of the committee on time and place of meeting of the Pennsylvania Pharmaceutical Association, spent several days at Forest Park Hotel, Pike County, making preliminary arrangements for the 1913 meeting of the state organization there.

The Pennsylvania Pharmaceutical Examining Board is making a statewide investigation of drug stores with a view to weeding out those that are being conducted without registered men. It will also prosecute those proprietors or assistants who fail to display their state certificates as directed by law. Several arrests of this character have been made in this city recently, the offenders all pleading guilty and paying fines and costs amounting to $23.50 each.

President Howard B. French, of the Philadelphia College of Pharmacy, has appointed the following as delegates to the sixtieth annual convention of the American Pharmaceutical Association: Joseph P. Remington (chairman), Henry Kraemer, Dr. C. B. Lowe, Dr. A. W. Miller and George M. Beringer, Camden, N. J. The board of trustees of the college has elected George M. Beringer chairman, Walter A. Rumsey vice chairman, and Jacob S. Beetem registrar.

Special Agent Harry P. Cassidy, of the Pennsylvania Dairy and Food Commission, has completed an investigation of the sale of soda water in the sections of the city occupied by the poorer classes, and as a result will issue about sixty-five warrants for dealers. The charge will be violation of the laws relating to the use of saccharin and flavors made from coal tar products. None of the accused, it is said, are retail druggists. Agent Cassidy found that these soda fountain proprietors, who do a thriving business during the summer months, are provided with the real fruit syrups that they use in making up drinks for persons that the dispenser has reason to believe will know what he or she is drinking. But the children furnish the greater source of profit and it is to this class of trade that the cheaper flavors, in which are the forbidden ingredients, are sold in soda.

South Carolina Association

The South Carolina Pharmaceutical Association met in its thirty-sixth annual convention on July 10 and 11 at the Isle of Palms. The delegates were welcomed by Lawrence M. Pinckney, mayor pro tem. of Charleston, and the response was made by O. F. Hart, first vice-president. The convention was a joint meeting of the pharmacists and the South Carolina Postmasters' Association. Several important measures were adopted by the pharmacists, among them that of having two grades of licenses in that state, one for full fledged pharmacists and one for assistant pharmacists. It will take a couple of years, however, to have the measures incorporated into the statutes. Glenn Springs was chosen as the place of meeting for next year.

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CHICAGO DRUGGISTS' ANNUAL BOAT RIDE

Big Crowd at Annual Outing—Chicago Social Drug Club Includes Ball Players and Bowlers

CHICAGO, August 7.—On Thursday, July 18, the C. R. D. A. had their annual boat ride, this time to Michigan City, Ind. Although it was raining when the steamer Theodore Roosevelt started, there was a big turnout. The weather cleared before the boat was fairly in the lake and from that time until the return to Chicago, at 7 in the evening, the weather man could not have done better if he had tried. Basket lunches, bathing and excursions among the sand dunes were the order of the day, and everybody seemed to have the time of their lives. A few snapshots of the events of the day are shown.

THE C. R. D. A. EXCURSION.
Well-known Chicago druggists on upper deck of "Theodore Roosevelt" on way to Michigan City, Ind. From right to left: J. P. Crowley, J. A. Mahaffey, Charles H. Avery, B. A. C. Hoelzer and Mr. Carroll.

Varied Activities of Social Drug Club

With their "Scandinavian Night," two weeks ago, the purely social season of the Social Drug Club was ended for a short period, unless we admit the big picnic they are to give at Shermerville later in the month is also in the nature of a social function. The special nights, one for each of the leading nationalities represented in the drug trade of Chicago have been a feature of the past year's activities that have made a big hit. The Social Drug Club is also strong on athletics, boasting this year four baseball and six bowling teams within its ranks.

In baseball the championship is, of course, still in doubt, though the Skylarks just now have a good lead.

The bowling season ended some weeks ago and we present herewith a picture of the Robert Burns team, the winning one of the six, with the cup which they won triumphantly displayed in the foreground. With the team are to be seen J. M. Schwalbe, secretary of the Bowling League, and Alex Smith, a substitute on the Robert Burns team. Phil Forbrich is captain of the championship team and his brother Joe is one of the star players.

CHICAGO NEWS NOTES

Last week August Arend, a retired druggist, seventy-eight years old, made an unsuccessful attempt at suicide by jumping overboard from a lake passenger steamer in mid-lake. Mr. Arend's name is still kept by the Arend Drug Company, doing business at the corner of Madison street and Fifth avenue, though he sold out fifteen years ago.

Many local druggists and those connected with the drug business are already away on vacation. L. J. Pelikan is at Glen Lake, Mich.; P. P. Hauber has just returned from an automobile trip to Indianapolis; Gust Frank is in the East; Editor Carr, of N. A. R. D. Notes, and his wife are at Lake Geneva, Wis.; E. W. Van Delden and wife are motoring through Canada and New York; Mrs. J. B. Wotell and son are at Grand Haven, Mich., and Mr. and Mrs. J. M. Schwalbe are spending their vacation at Mackinac Island and Georgian Bay.

Registered in Colorado

At the recent examinations of the Colorado board the following were successful in passing the test: Guy Brunnert, T. H. Coltman, William Cooper, Henry Hayutin, H. B. Kennison, Henry Kolsch, W. E. Lawless, Paul W. Macker, W. S. Payne, J. A. Renner, C. E. Schroeder, Oliver Wicks.

Meeting of the Executive Board of The American Druggists' Fire Insurance Co.

A splendid increase in growth and business was shown at the regular quarterly meeting of the executive board of The American Druggists' Fire Insurance Company, held on July 20. Messrs. Avery, Heinritz, Kauffman, Beal, Rothwell, Zwick and Freericks were present. During the first six months of the year the company wrote insurance to the amount of $5,218,131.04, at a premium of $53,665.32. This is an increase over the first half year of 1911 of $1,116,340.71, in insurance, at a premium increase of $10,420.72. The total business in force on July 1 amounted to $9,074,009.13 at a premium of $94,194.11. The income of the company for the first six months from premiums, securities, etc., was $61,137.77. The net fire losses incurred during the first six months amounted to $27,937.72. The net expenses charged against the business of the first six months, including all items, amounted to $18,133.82. The increase in reinsurance reserve on increased business retained by the company amounted to $3,831.45. Business reinsured was at a premium of $3,237.71. During the first half year the company has saved its policyholders the sum of $17,799 in premiums, which amount has been retained by the policyholders, and this indicates that the net savings which the company will make for its policyholders during the year will exceed $35,000. The board directed an additional investment of $7,000 in municipal securities.

THE ROBERT BURNS, WINNING TEAM OF THE SOCIAL DRUG CLUB'S BOWLING LEAGUE.
Left to right: Otto Niethammer, Alex. Smith (sub.), Joseph Forbrich, Philip Forbrich, captain; Ray Von Danden, Charles Friesenecker, J. M. Schwalbe.

A. J. Schroeder, of Clayton, Ill., has opened a drug store in the Bradway Building, Abingdon, and will be assisted by his brother, Henry Schroeder. Mr. Schroeder has been in business for several years in Clayton. The building which he now occupies is that formerly known as the Weirather Pharmacy, which has been remodeled.

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